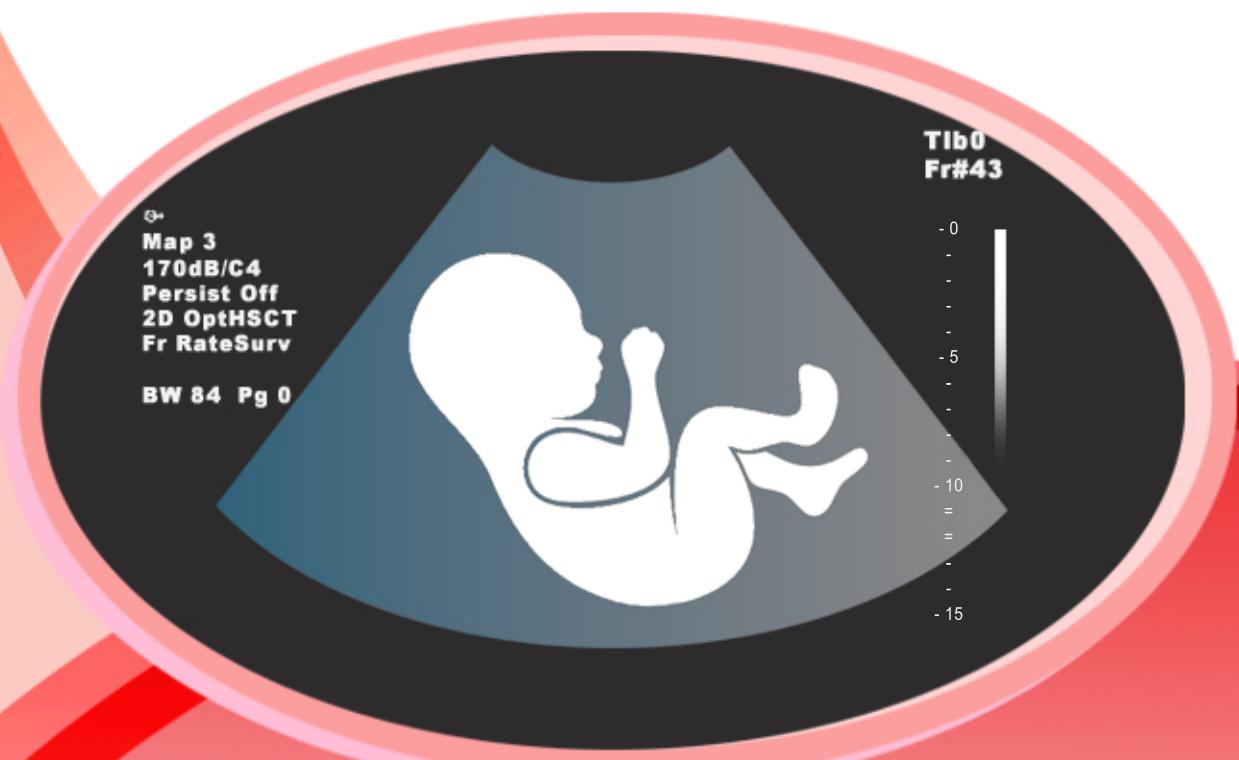


NATIONAL OBSTETRICS REGISTRY

4th REPORT OF NATIONAL OBSTETRICS REGISTRY 2013 - 2015



Editors:
Ravichandran Jeganathan
Shamala Devi Karalasingam

A publication of the National Obstetrics Registry and the Clinical Research Centre,
Ministry of Health Malaysia



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4th REPORT

JAN 2013 – DEC 2015

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- The registry coordinating team and technical support team for their commitment and contribution in preparing this report.

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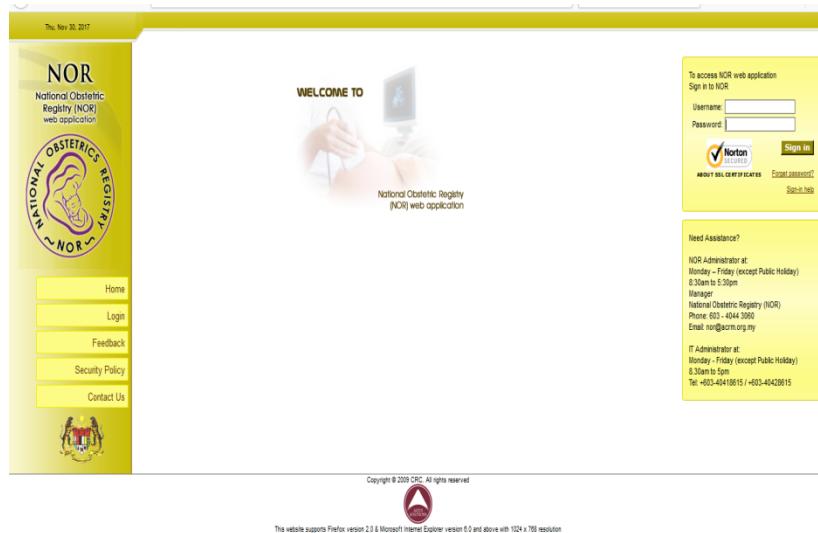
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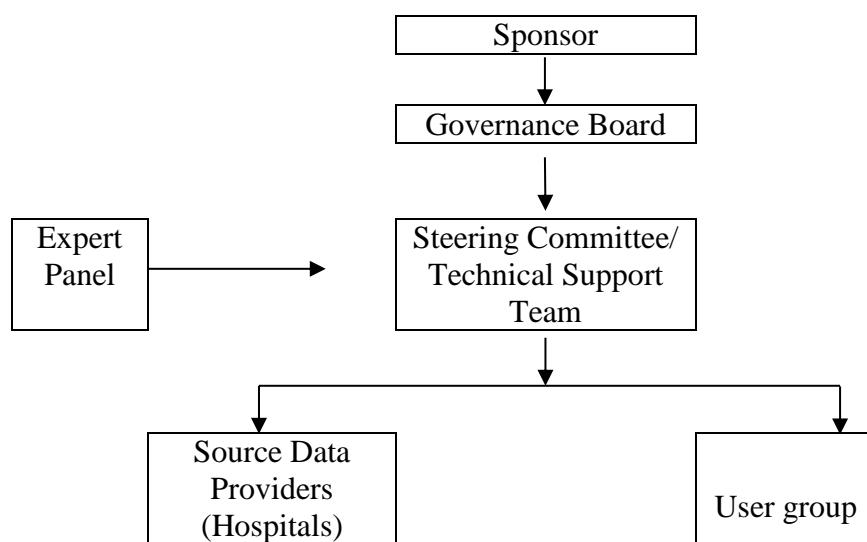
NOR WEB APPLICATION

1. Go to www.acrm.org.my and click on NOR
2. Login to NOR
3. Select Patient and fill up NOR notification and relevant details.
4. Print out reports.



ORGANIZATION OF NOR

The organizational structure for the registry is depicted below.



LETTER FROM THE PRINCIPAL INVESTIGATOR

The National Obstetrics Registry (NOR) is one of the largest obstetric databases in the world to date. Since its inception in 2009, the database has expanded, and I am proud to say that as of **October 2016**, we have crossed the **1 million mark**, which is a major milestone for a rather young registry.

NOR data has been presented and quoted at local and international conferences and congresses and it is one of the recognized source of information on Obstetric performance in Malaysia. This ^{4TH} report covers the years 2013 to 2015. In 2015 Hospital Segamat, came on board and its data has been included in this report. The format of this report is different to the previous reports as only one chapter is written focusing on a single theme. We looked at Stillbirth in tandem with World Health Organization's theme for 2016 "**Making every baby count**". In 2016 NOR collaborated with the International Consortium of Health Outcome Measures (ICHOM) based in Harvard, Boston Massachusetts to develop a Standard set of variables which could be used to benchmark performance internationally as well as locally.

Posters and oral presentations using NOR data had been presented at local and international conferences namely; International Federation of Gynaecology and Obstetrics (FIGO) at Vancouver Canada, ICHOM conference in London, UK, RCOG World Congress in Birmingham, UK and RCOG World Congress in Cape Town, South Africa, to name a few. Most of our presentations have been shortlisted for honourable mention. Three manuscripts have been published this year of which 2 are in international journals.

The total data analysed in this 4th report was 415,021 deliveries. Data cleaning and analysis of this enormous data was undertaken by the CRC team. **Kudos** to the core team from CRC for all the hard work to make this 4th report a reality. I would like to thank the site coordinators, site assistants and the O&G Heads of Department of the participating hospitals for their dedication and continuous support to NOR. A special mention of thanks to the manager of NOR Dr Shamala for her continued dedication which is instrumental in the success of NOR

My heartfelt gratitude to the Director General of Health and the Clinical Research Centre, Malaysia for their unrelenting guidance and backing for the National Obstetrics Registry.

Best Wishes,

Dr J. Ravichandran R. Jeganathan
Principal Investigator NOR
National Service Head O&G
Ministry of Health, Malaysia.

ABBREVIATIONS

APH	Antepartum haemorrhage
BMI	Body Mass Index
CPD	Cephalopelvic disproportion
CRC	Clinical Research Centre
CS	Caesarean section
DIVC	Disseminated Intravascular Coagulopathy
DVT	Deep vein thrombosis
DM	Diabetes Mellitus
ECV	External Cephalic Version
FSB	Fresh Stillbirth
GDM	Gestational Diabetes Mellitus
HDP	Hypertensive Disorder In Pregnancy
HKL	General Hospital Kuala Lumpur
HPP	Pulau Pinang Hospital
HPT	Hypertension
HWKK	Hospital Wanita and Kanak Kanak
HO	House Officer
HRPB	Raja Permaisuri Bainun Hospital
HRPZ	Raja Perempuan Zainab II Hospital
HSNZ	Sultanah Nur Zahirah Hospital
HSA	Sultanah Aminah Hospital
HSB	Sultanah Bahiyah Hospital
HTAR	Tengku Ampuan Rahimah Hospital
HTAA	Tengku Ampuan Afzan Hospital
HTF	Tengku Fauziah Hospital
HTJ	Tuanku Jaafar Hospital
HUS	Sarawak General Hospital
HIV	Human Immunodeficiency Virus
ICU	Intensive Care Unit

ICD	International Classification Of Disease
IHD	Ischaemic Heart Disease
ICHOM	International consortium for health outcome measures
ITP	Idiopathic Thrombocytopenic Purpura
IUD	Intrauterine Death
IUGR	Intrauterine Growth Restriction
LCM	Lethal Congenital Malformation
LSCS	Lower Segment Caesarean Section
MO	Medical Officer
MOH	Ministry Of Health
MSB	Macerated Stillbirth
NA	Not Available
NICU	Neonatal Intensive Care Unit
NOR	National Obstetrics Registry
NYHA	New York Heart Association
OA	Orang Asli
OI	Other Indigenous
O&G	Obstetrics and Gynaecology
PE	Preeclampsia
PIH	Pregnancy Induced Hypertension
PP	Placenta Praevia
PPH	Postpartum Haemorrhage
PPROM	Prelabour Preterm Rupture of Membrane
RCOG	Royal College of Obstetrics and Gynaecology
SB	Stillbirth
SDP	Site Data Provider
SGA	Small for gestational age
STI	Sexually transmitted infection
SVD	Spontaneous Vertex Delivery
TB	Tuberculosis
WHO	World Health Organization

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STILLBIRTH

INTRODUCTION

An estimated 2.6 million stillbirths occur every year. Worldwide in 2015 for every 1000 total births, 18.4 babies are stillborn mostly in the low and middle income countries¹ as compared with 24.7 stillbirths in 2000. WHO definition for stillbirth uses ICD-10 birthweight $\geq 500\text{g}$ or if missing ≥ 22 completed weeks or if missing body length $\geq 25\text{cm}$. In many countries the definition of stillbirth varies from WHO. In Australia, New Zealand, Canada and United States stillbirth is a death that occurs around 20 weeks gestation. In the United Kingdom a lower limit of 24 weeks gestational age is used to define stillbirth. However, for international comparison WHO uses the definition, a death that occurs before birth in a baby weighing $\geq 1000\text{g}$ or if missing ≥ 28 completed weeks of gestation or if missing body length $\geq 35\text{cm}$. This report follows the WHO recommendation and covers all stillbirths delivered weighing 500g with a corresponding gestational age of 22 weeks.

The stillbirth rate is a key indicator of quality of care during pregnancy and childbirth. From the Malaysian Health Facts 2016, it was reported that the stillbirth rates in Malaysia was 4.4 per 1000 livebirths in 2015, 4.3 per 1000 livebirths in 2014 and 2013. Every Macerated and Fresh stillbirth is classified using the modified Wigglesworth classification.

Trends in Stillbirth from Malaysian Tertiary Hospitals

This report looks at trends of stillbirth from 2013 to 2015 from 13 tertiary State hospitals in Malaysia and 1 hospital in the Federal territory. In 2015 Hospital Segamat, a district hospital with specialist contributed data to the National Obstetrics Registry. Stillbirth rates are calculated as number of stillbirth per 1000 livebirths. In calculating the rate, number of stillbirths is divided by the number of live births + stillbirth x 1000.

The data captured is from the tertiary hospitals and the rates are higher than the national average. The overall stillbirth rates were 7.0 per 1000 livebirths in 2013, 6.74 per 1000 livebirths in 2014 and 6.07 per 1000 livebirths in 2015. HKL had the highest stillbirth rates between 2013- 2015 with rates at 11.54, 12.67 and 10.97 per 1000 livebirths. The lowest rates were seen from HTJ N. Sembilan in 2013 at 3.30 per 1000 livebirths from HRPZ 11 Kelantan in 2014 at 3.81 per 1000 livebirths. In 2015 the lowest rate was seen from HUS, Sarawak at 3.08 per 1000 livebirths.

Table 1.1a :Trends in Stillbirth by Hospitals 2013

SDP	2013				
	Total Deliveries	FSB	MSB	Live birth	SB Rate
	n	n	n	n	
HSA, Johor	7,897	18	48	7,831	8.43
HSB, Kedah	10,239	20	49	10,170	6.78
HRPZ II, Kelantan	12,017	13	40	11,964	4.43
Malacca Hospital	10,630	11	51	10,568	5.87
HTJ, N. Sembilan	4,859	2	14	4,843	3.30
HTAA, Pahang	7,959	11	25	7,923	4.54
HRPB, Perak	4,107	14	11	4,082	6.12
HTF, Perlis	3,898	6	9	3,883	3.86
HPP Pulau Pinang	3,721	8	5	3,708	3.51
HWKK Likas, Sabah	15,392	60	93	15,239	10.04
HUS, Sarawak	4,530	11	15	4,504	5.77
HTAR, Selangor	12,144	28	68	12,048	7.97
HSNZ, Terengganu	13,746	27	67	13,652	6.89
HKL	10,957	40	85	10,832	11.54
H. Segamat	-	-	-	-	-
Total	122,096	269	580	121,247	7.00

Table 1.1b :Trends in Stillbirth by Hospitals 2014

SDP	2014				
	Total Deliveries	FSB	MSB	Live birth	SB Rate
	n	n	n	n	
HSA, Johor	11,001	18	50	10,933	6.22
HSB, Kedah	9,362	14	46	9,302	6.45
HRPZ II, Kelantan	12,396	7	40	12,349	3.81
Malacca Hospital	11,019	14	47	10,958	5.57
HTJ, N. Sembilan	8,343	9	23	8,311	3.85
HTAA, Pahang	7,982	17	20	7,945	4.66
HRPB, Perak	6,488	16	15	6,457	4.80
HTF, Perlis	4,184	5	19	4,160	5.77
HPP Pulau Pinang	4,574	12	20	4,542	7.05
HWKK Likas, Sabah	15,702	52	101	15,549	9.84
HUS, Sarawak	11,745	26	23	11,696	4.19
HTAR, Selangor	12,863	25	74	12,764	7.76
HSNZ, Terengganu	14,572	22	91	14,459	7.82
HKL	11,426	39	104	11,283	12.67
H. Segamat	-	-	-	-	-
Total	141,657	276	673	140,708	6.74

Table 1.1c :Trends in Stillbirth by Hospitals 2015

SDP	2015				
	Total Deliveries	FSB	MSB	Live birth	SB Rate
	n	n	n	n	
HSA, Johor	14,600	42	53	14,505	6.55
HSB, Kedah	9,704	18	33	9,653	5.28
HRPZ II, Kelantan	11,908	10	29	11,869	3.29
Malacca Hospital	11,733	20	37	11,676	4.88
HTJ, N. Sembilan	9,240	21	41	9,178	6.76
HTAA, Pahang	10,091	15	23	10,053	3.78
HRPB, Perak	7,607	17	17	7,573	4.49
HTF, Perlis	4,479	10	18	4,451	6.29
HPP Pulau Pinang	3,712	13	14	3,685	7.33
HWKK Likas, Sabah	15,441	37	106	15,298	9.35
HUS, Sarawak	10,739	14	19	10,706	3.08
HTAR, Selangor	13,036	37	47	12,952	6.49
HSNZ, Terengganu	15,693	32	60	15,601	5.90
HKL	9,956	36	72	9,848	10.97
H. Segamat	3,329	5	16	3,308	6.35
Total	151,268	327	585	150,356	6.07

Color coding and Stillbirth

In 2013 about 5.5% of cases were not color coded and in 2014 about 6.4% had no color coding. In 2015 about 6.6% deliveries were not color coded. Of those that were color coded, the red color codes had a higher stillbirth rate of 19.46 per 1000 livebirths in 2013, 17.63 per 1000 livebirths in 2014 and 15.12 per 1000 livebirths in 2015. Lowest stillbirth rates was seen in women color code white 11 at 5.01 per 1000 livebirths in 2013, white 1 at 5.33 per 1000 livebirths in 2014 and white 11 at 4.12 per 1000 livebirths per 1000 livebirths. The highest stillbirth rates were seen in women coded red at booking in all the ethnic groups. In 2013 and 2014, Indian women who were not coded had the highest stillbirth rates whilst in 2015 it was seen in other.

Table 1.2: Stillbirth rate in relation to risk levels at booking 2013 - 2015

Risk Level at Booking	2013				2014				2015						
	Total Deliveries	FSB	MSB	Live birth	SB Rate	Total Deliveries	FSB	MSB	Live birth	SB Rate	Total Deliveries	FSB	MSB	Live birth	SB Rate
	n	n	n	n		n	n	n	n		n	n	n	n	
Red	3,038	15	43	2,980	19.46	2,944	8	43	2,893	17.63	2,619	14	25	2,580	15.12
Yellow	22,697	39	96	22,562	5.98	21,386	45	103	21,238	6.97	17,982	35	94	17,853	7.23
Green	69,686	124	278	69,284	5.80	93,369	154	348	92,867	5.41	112,671	184	357	112,130	4.82
White II	5,216	10	16	5,190	5.01	3,635	5	18	3,612	6.37	2,192	3	6	2,183	4.12
White I	14,699	36	60	14,603	6.57	11,324	16	44	11,264	5.33	5,882	10	18	5,854	4.78
No Code	4,212	24	52	4,136	18.38	4,346	22	60	4,264	19.23	3,878	26	29	3,823	14.39
NA	2,548	21	35	2,492	22.47	4,653	26	57	4,570	18.16	6,044	55	56	5,933	18.71

Table 1.3a: Stillbirth in relation to risk level at booking by Ethnicity 2013

Risk Level at Booking	2013																	
	Malay			Chinese			Indian			Indigenous			Others			Foreigner		
	SB	Live birth	SB Rate	SB	Live birth	SB Rate	SB	Live birth	SB Rate	SB	Live birth	SB Rate	SB	Live birth	SB Rate	SB	Live birth	SB Rate
	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
Red	34	2,207	15.41	4	132	30.30	3	166	18.07	7	270	25.93	2	36	55.56	8	154	51.95
Yellow	91	16,142	5.64	2	1,183	1.69	11	1,512	7.28	17	1,929	8.81	6	279	21.51	8	1,433	5.58
Green	249	49,546	5.03	18	3,142	5.73	19	2,809	6.76	76	7,272	10.45	8	971	8.24	32	5,258	6.09
White II	13	3,181	4.09	0	209	0.00	0	77	0.00	6	1,047	5.73	4	215	18.60	3	436	6.88
White I	63	10,255	6.14	4	857	4.67	6	498	12.05	13	1,465	8.87	1	231	4.33	9	1,241	7.25
No Code	38	2,315	16.41	4	217	18.43	8	165	48.48	3	350	8.57	2	63	31.75	21	978	21.47

Table 1.3b: Stillbirth in relation to risk level at booking by Ethnicity 2014

Risk Level at Booking	2014																	
	Malay			Chinese			Indian			Indigenous			Others			Foreigner		
	SB	Live birth	SB Rate	SB	Live birth	SB Rate	SB	Live birth	SB Rate	SB	Live birth	SB Rate	SB	Live birth	SB Rate	SB	Live birth	SB Rate
Red	30	2,075	14.46	4	161	24.84	2	145	13.79	10	287	34.84	1	44	22.73	4	170	23.53
Yellow	92	14,730	6.25	6	1,209	4.96	15	1,362	11.01	20	2,241	8.92	3	304	9.87	11	1,299	8.47
Green	338	65,974	5.12	35	5,138	6.81	23	3,625	6.34	55	9,923	5.54	14	1,274	10.99	33	6,549	5.04
White II	15	2,746	5.46	0	177	0.00	1	56	17.86	3	305	9.84	0	41	0.00	4	270	14.81
White I	39	8,196	4.76	4	779	5.13	5	400	12.50	7	773	9.06	0	121	0.00	5	935	5.35
No Code	42	2,366	17.75	4	289	13.84	7	141	49.65	9	330	27.27	0	73	0.00	19	1,038	18.30

Table 1.3c: Stillbirth in relation to risk level at booking by Ethnicity 2015

Risk Level at Booking	2015																	
	Malay			Chinese			Indian			Indigenous			Others			Foreigner		
	SB	Live birth	SB Rate	SB	Live birth	SB Rate	SB	Live birth	SB Rate	SB	Live birth	SB Rate	SB	Live birth	SB Rate	SB	Live birth	SB Rate
Red	23	1,983	11.60	2	143	13.99	1	96	10.42	9	212	42.45	0	22	0.00	4	106	37.74
Yellow	83	12,415	6.69	9	1,111	8.10	15	1,171	12.81	18	2,121	8.49	0	144	0.00	4	784	5.10
Green	390	82,202	4.74	15	6,474	2.32	40	4,286	9.33	64	11,976	5.34	3	799	3.75	26	5,687	4.57
White II	6	1,669	3.59	0	96	0.00	0	41	0.00	1	209	4.78	0	19	0.00	2	135	14.81
White I	19	4,189	4.54	1	395	2.53	1	206	4.85	5	559	8.94	0	30	0.00	2	421	4.75
No Code	26	2,093	12.42	2	339	5.90	2	128	15.63	6	356	16.85	2	44	45.45	17	813	20.91

Ethnicity and Stillbirth

The total births among Malay women from Malaysian tertiary hospitals was between 69.9% to 72.9% during the study period. In the Chinese it was between 4.84% to 6.03% while in the Indians it was between 4.1% - 4.3%. Amongst the three main ethnic groups in Malaysia stillbirth rates in the tertiary hospitals were highest amongst the Indians mothers.

Table 1.4a: Distribution of stillbirth by Ethnicity 2013

Ethnicity	2013				
	Total Deliveries		FSB	MSB	Live birth
	n	n	n	n	SB Rate
Malay	85,358	153	352	84,853	5.95
Chinese	5,916	11	24	5,881	5.95
Indian	5,377	14	36	5,327	9.39
Kadazan/ Dusun	4,302	19	30	4,253	11.52
Murut	302	1	2	299	10.03
Bajau	3,314	7	12	3,295	5.77
Melanau	35	0	1	34	29.41
Iban	1081	1	6	1,074	6.52
Bidayuh	781	2	4	775	7.74
OA Peninsular Malaysia	696	6	5	685	16.06
OI Sabah & Sarawak	2,283	13	15	2,255	12.42
Foreigner	10,217	36	75	10,106	10.98
Others	1,876	6	17	1,853	12.41
NA	558	0	1	557	1.80

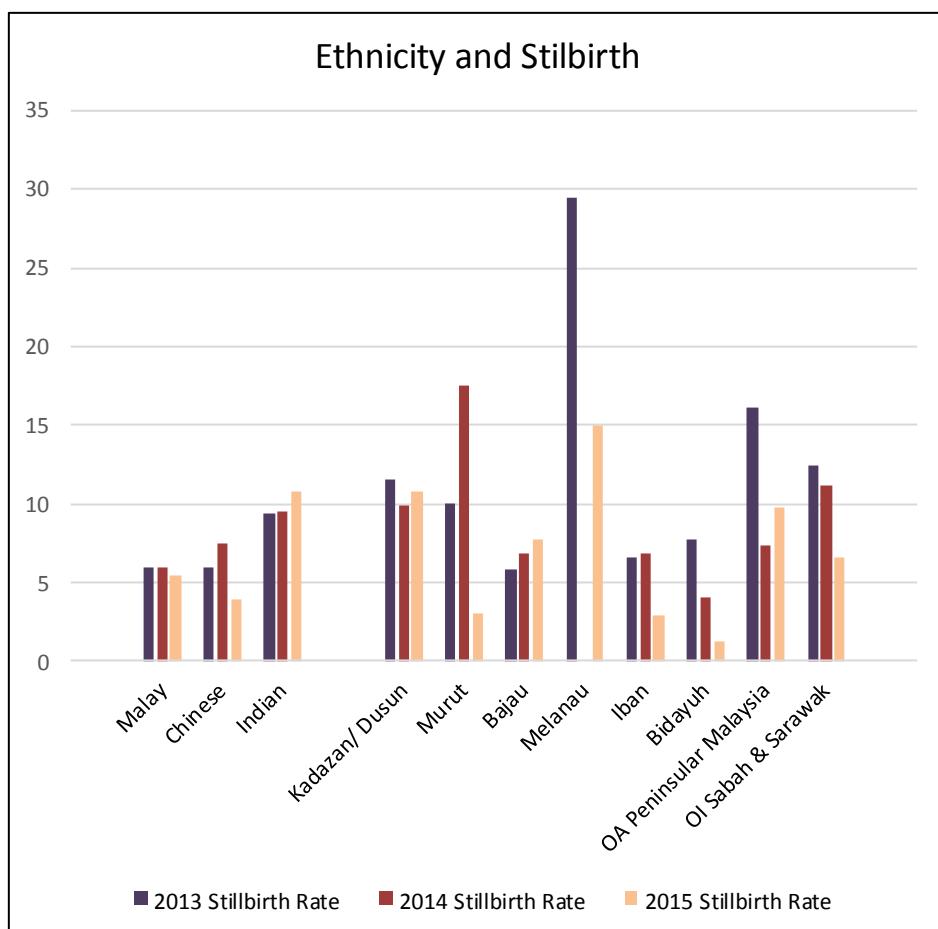
Table 1.4b: Distribution of stillbirth by Ethnicity 2014

Ethnicity	2014				
	Total Deliveries		FSB	MSB	Live birth
	n	n	n	n	SB Rate
Malay	98,765	151	435	98,179	5.97
Chinese	8,037	24	36	7,977	7.52
Indian	5,979	17	39	5,923	9.45
Kadazan/ Dusun	4,291	16	26	4,249	9.88
Murut	291	2	3	286	17.48
Bajau	3,219	9	13	3,197	6.88
Melanau	51	0	0	51	0.00
Iban	2221	6	9	2,206	6.80
Bidayuh	1741	3	4	1,734	4.04
OA Peninsular Malaysia	820	3	3	814	7.37
OI Sabah & Sarawak	2,092	6	17	2,069	11.12
Foreigner	11,433	29	72	11,332	8.91
Others	2,062	7	12	2,043	9.30
NA	655	3	4	648	10.80

Table 1.4c: Distribution of stillbirth by Ethnicity 2015

Ethnicity	2015				
	Total Deliveries	FSB	MSB	Live birth	SB Rate
	n	n	n	n	
Malay	107,812	214	375	107,223	5.49
Chinese	8,932	21	14	8,897	3.93
Indian	6,309	24	43	6,242	10.73
Kadazan/ Dusun	4,620	10	39	4,571	10.72
Murut	335	1	0	334	2.99
Bajau	3,501	7	20	3,474	7.77
Melanau	68	0	1	67	14.93
Iban	2051	1	5	2,045	2.93
Bidayuh	1617	2	0	1,615	1.24
OA Peninsular Malaysia	1133	6	5	1,122	9.80
OI Sabah & Sarawak	3,501	1	22	3,478	6.61
Foreigner	9,143	32	56	9,055	9.72
Others	1,172	4	4	1,164	6.87
NA	1074	4	1	1,069	4.68

Figure 1.1: Stillbirth rates by Ethnicity



Stillbirth rates amongst the indigenous mothers were highest amongst the Melanau in 2013 and 2015. In 2014 the rates were high in Bajau mothers.

Maternal Age and Stillbirth

The highest rates were seen in mothers who were older aged 40-49 years. In 2013 stillbirth rates were 25 per 1000 livebirths in mothers aged 45-49 years. In 2014 the rate was 50 per 1000 livebirths in mothers in age group 50-55 years and in 2015 the rate was 43.89 per 1000 livebirths in mothers aged 45-49 years. High stillbirth rates were seen in extremes of age. In 2013 and 2015, mothers in age group between 10-14 years had a stillbirth rate of 17.70 per 1000 livebirths and 15.50 per 1000 livebirths respectively but there were no stillbirth reported in 2014.

Table 1.5a: Stillbirth rate by Maternal Age 2013

Age	2013					SB Rate
	Total Deliveries	FSB	MSB	Live birth	n	
	n	n	n	n	n	
10-14	115	2	0	113	113	17.70
15-19	5,810	21	28	5,761	5,761	8.51
20-24	22,224	43	103	22,078	22,078	6.61
25-29	43,288	81	173	43,034	43,034	5.90
30-34	31106	62	143	30,901	30,901	6.63
35-39	15208	40	86	15,082	15,082	8.35
40-44	4037	18	42	3,977	3,977	15.09
45-49	287	2	5	280	280	25.00
50-54	18	0	0	18	18	0.00
>=55	3	0	0	3	3	0.00

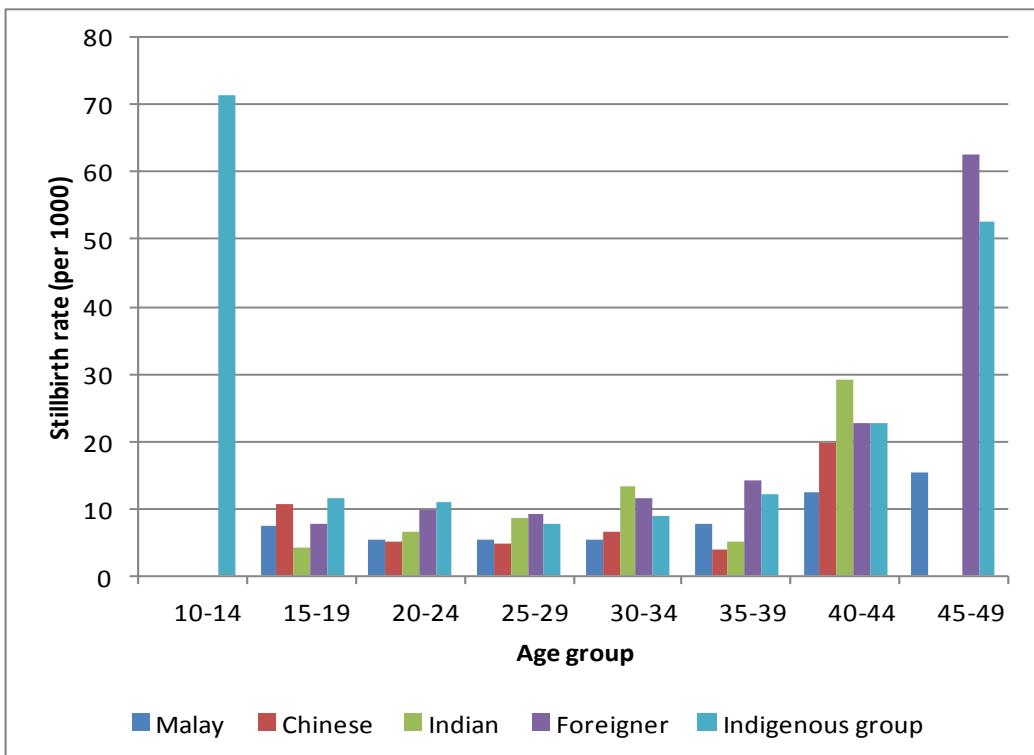
Table 1.5b: Stillbirth rate by Maternal Age 2014

Age	2014					SB Rate
	Total Deliveries	FSB	MSB	Live birth	n	
	n	n	n	n	n	
10-14	130	0	0	130	130	0.00
15-19	6,750	20	28	6,702	6,702	7.16
20-24	25,208	42	116	25,050	25,050	6.31
25-29	49,423	76	197	49,150	49,150	5.55
30-34	37492	82	162	37,248	37,248	6.55
35-39	17644	43	107	17,494	17,494	8.57
40-44	4658	12	55	4,591	4,591	14.59
45-49	330	1	7	322	322	24.84
50-54	21	0	1	20	20	50.00
>=55	1	0	0	1	1	0.00

Table 1.5c: Stillbirth rate by Maternal Age 2015

Age	2015					SB Rate
	Total Deliveries	FSB	MSB	Live birth	n	
	n	n	n	n	n	
10-14	131	2	0	129	129	15.50
15-19	6,615	20	25	6,570	6,570	6.85
20-24	26,768	41	93	26,634	26,634	5.03
25-29	52,346	93	164	52,089	52,089	4.93
30-34	40790	87	166	40,537	40,537	6.24
35-39	19208	62	92	19,054	19,054	8.08
40-44	5056	14	39	5,003	5,003	10.59
45-49	333	8	6	319	319	43.89
50-54	16	0	0	16	16	0.00
>=55	5	0	0	5	5	0.00

Figure 1.2: Stillbirth in relation to Ethnicity and Age 2013



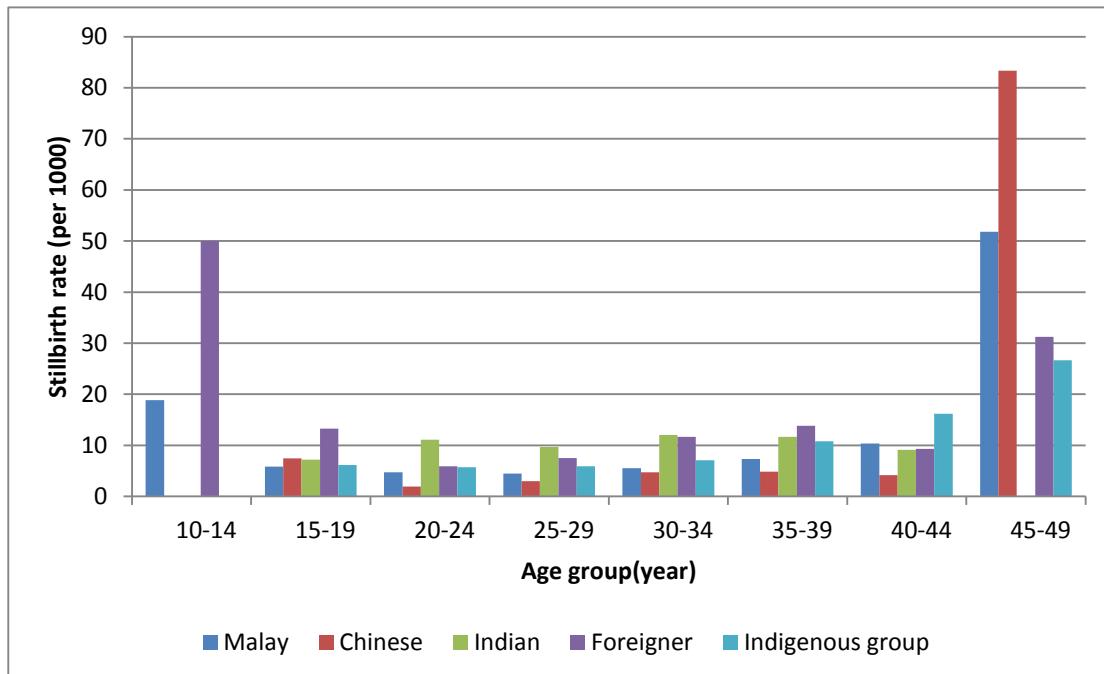
In indigenous mothers stillbirth rates were high in extremes of age in 2013. Stillbirth rates were 71.43 per 1000 live births in Indigenous mothers aged 10-14 years and 52.63 per 1000 live births in indigenous mothers age 45-49 years. Higher the maternal age higher the stillbirth rate was seen in all mothers.

Table 1.6: Stillbirth in relation to Ethnicity, Age 2014

Age	2014														
	Malay			Chinese			Indian			Indigenous group			Foreigner		
	n	Livebirth	SB Rate	n	Livebirth	SB Rate	n	Livebirth	SB Rate	n	Livebirth	SB Rate	n	Livebirth	SB Rate
10-14	0	74	0	0	6	0	0	4	0	0	32	0.00	0	13	0
15-19	18	3,586	5.02	1	369	2.71	4	246	16.26	12	1421	8.44	11	1,020	10.78
20-24	87	16,341	5.32	14	1,336	10.48	4	979	4.09	31	3629	8.54	18	2,620	6.87
25-29	186	36,128	5.15	10	2,504	3.99	18	2,001	9	42	5161	8.14	17	3,159	5.38
30-34	153	26,197	5.84	19	2,457	7.73	16	1,863	8.59	27	3958	6.82	29	2,640	10.98
35-39	93	12,350	7.53	13	1,114	11.67	11	716	15.36	16	1841	8.69	16	1,394	11.48
40-44	44	3,284	13.4	3	180	16.67	3	104	28.85	10	554	18.05	7	440	15.91
45-49	5	211	23.7	0	11	0	0	7	0	0	51	0.00	3	38	78.95
50-54	0	7	0	-	-	-	0	3	0	1	2	500.00	0	8	0

In 2014 stillbirth rates were higher in all mothers aged 40 years and above. Highest rates were among indigenous and foreigners. Stillbirth rate among the Chinese mothers were the lowest in 2015 between ages 15 to 44 years as compared to the other ethnic groups. However, the rates were high in Chinese mothers in age group 45-49 years at 83.33 per 1000 livebirths. Malay mothers aged 45-49 years had a high stillbirth rate of 53 per 1000 livebirths in 2015 and in foreigners the rates were 50 per 1000 livebirths in age group 10-14 years.

Figure 1.3: Stillbirth in relation to Ethnicity and Age 2015



Parity and Stillbirth

Stillbirth rates were higher in women Para 6 and more and this was seen in all the 3 years. The rates were also higher in mothers who were Para 1 when compared to mothers who were Para 2-5.

Table 1.7a: Stillbirth rate by Parity 2013

Parity	2013				
	Total Deliveries	FSB	MSB	Live birth	SB Rate
	n	n	n	n	
1	42,546	102	211	42,233	7.41
2-5	72,549	137	329	72,083	6.46
≥6	5,902	27	35	5,840	10.62

Table 1.7b: Stillbirth rate by Parity 2014

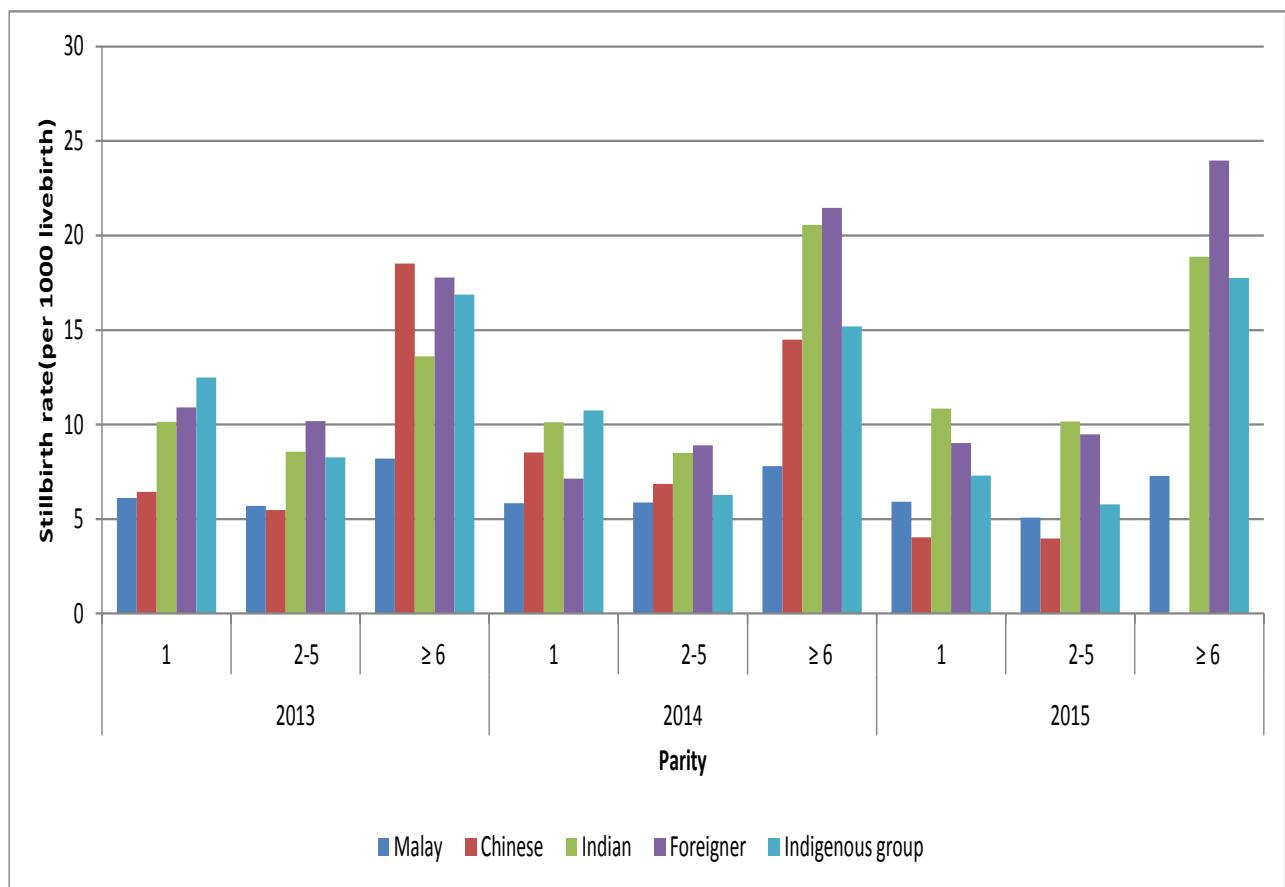
Parity	2014				
	Total Deliveries	FSB	MSB	Live birth	SB Rate
	n	n	n	n	
1	49,022	115	225	48,682	6.98
2-5	84,816	140	391	84,285	6.30
≥6	6,243	14	50	6,179	10.36

Table 1.7c: Stillbirth rate by Parity 2015

Parity	2015				
	Total Deliveries	FSB	MSB	Live birth	SB Rate
	n	n	n	n	
1	52,597	123	210	52,264	6.37
2-5	91,393	188	317	90,888	5.56
≥6	6,248	11	52	6,248	10.08

In all ethnic groups stillbirth rates were higher in mothers Para 6 and more between 2013-2014. There were no reported cases of stillbirth in Chinese mothers Para 6 and more in 2015. Stillbirth rates in foreigners were higher compared to locals in 2014 and 2015 in mothers Para 6 and more.

Figure 1.4: Distribution by Ethnicity and Parity 2013 – 2015



Maternal Body Mass Index(BMI) and Stillbirth

Distribution of Stillbirth using the WHO BMI classification in 2013, showed the rate to be high at 10.55 per 1000 livebirths in mothers with BMI 40 and more. But there was no significant correlation between BMI and stillbirth in 2014 and 2015. By using the Asian BMI classification, the stillbirth rates were higher with a lower BMI >37.5 than the WHO BMI classification at 10.89 per 1000 livebirths in 2013 but no significant correlation in subsequent years. In 2015 stillbirth rates in women with BMI< 16.0 were high at 10.35 per 1000 livebirths . The rates were less than half in 2013 and 2014.

Table 1.8a: Stillbirth rate in relation to WHO and Asian BMI classifications 2013

BMI	2013				
	Total Deliveries	FSB	MSB	Live birth	SB Rate
	n	n	n	n	
WHO Classifications					
<18.5	10,104	20	28	10,056	4.77
18.5-24.9	50,433	124	259	50,050	7.65
25.0-29.9	36,200	78	173	35,949	6.98
30.0-34.9	17,203	28	69	17,106	5.67
35.0-39.9	5,642	15	34	5,593	8.76
40 and more	1,915	4	16	1,895	10.55
Asian Classifications					
<16	957	1	3	953	4.20
16.0-18.4	9,147	19	25	9,103	4.83
18.5-22.9	30,690	69	158	30,463	7.45
23.0-27.4	44,021	107	224	43,690	7.58
27.5-32.5	24,453	46	102	24,305	6.09
32.6-37.5	8,888	18	40	8,830	6.57
>37.5	3,341	9	27	3,305	10.89

Table 1.8b: Stillbirth rate in relation to WHO and Asian BMI classifications 2014

BMI	2014				
	Total Deliveries	FSB	MSB	Live birth	SB Rate
	n	n	n	n	
WHO Classifications					
<18.5	11,187	23	38	11,126	5.48
18.5-24.9	58,009	121	308	57,580	7.45
25.0-29.9	41,857	74	177	41,606	6.03
30.0-34.9	20,509	43	92	20,374	6.63
35.0-39.9	6,998	10	38	6,950	6.91
40 and more	2,435	4	14	2,417	7.45
Asian Classifications					
<16	1,062	4	1	1,057	4.73
16.0-18.4	10,125	19	37	10,069	5.56
18.5-22.9	35,485	72	180	35,233	7.15
23.0-27.4	49,933	106	245	49,582	7.08
27.5-32.5	29,195	46	127	29,022	5.96
32.6-37.5	10,964	22	54	10,888	6.98
>37.5	4,231	6	23	4,202	6.90

Table 1.8c: Stillbirth rate in relation to WHO and Asian BMI classifications 2015

BMI	2014				
	Total Deliveries	FSB	MSB	Live birth	SB Rate
	n	n	n	n	
WHO Classifications					
<18.5	9,092	14	31	9,047	4.97
18.5-24.9	67,089	153	241	66,695	5.91
25.0-29.9	43,538	101	181	43,256	6.52
30.0-34.9	21,285	40	83	21,162	5.81
35.0-39.9	7,382	13	38	7,331	6.96
40 and more	2,864	6	11	2,847	5.97
Asian Classifications					
<16	1,074	4	7	1,063	10.35
16.0-18.4	8,018	10	24	7,984	4.26
18.5-22.9	43,685	96	147	43,442	5.59
23.0-27.4	48,170	115	196	47,859	6.50
27.5-32.5	32,678	67	131	32,480	6.10
32.6-37.5	12,259	25	58	12,176	6.82
>37.5	5,366	10	22	5,334	6.00

Evidence suggests that both maternal overweight and underweight increases the risk of fetal death, stillbirth, and infant death. In 2013, Indigenous and foreigners had a higher stillbirth rate when the BMI was 40 and more. Indian mothers with BMI 30.0-34.9 had the highest rates at 14.27 per 1000 live births whilst in the Malay and Chinese mothers there was no significant correlation between BMI and stillbirth rates. By the Asian BMI classification, the stillbirth rates were high in Indigenous population and foreigners with a BMI > 37.5. By this classification the Chinese and others ethnic groups had a higher stillbirth with BMI < 16.

Table 1.9a: Stillbirth rate in relation to WHO and Asian BMI classifications and Ethnicity 2013

BMI	2013																	
	Malay			Chinese			Indian			Indigenous			Others			Foreigner		
	SB	Live birth	SB Rate	SB	Live birth	SB Rate	SB	Live birth	SB Rate	SB	Live birth	SB Rate	n	Live birth	SB Rate	n	Live birth	SB Rate
WHO Classification	n	n		n	n		n	n		n	n		n	n		n	n	
<18.5	33	7,541	4.38	3	504	5.95	2	575	3.48	5	657	7.61	2	88	22.73	3	660	4.55
18.5-24.9	210	32,844	6.39	19	2,853	6.66	22	1,899	11.59	64	6,103	10.49	6	866	6.93	61	5,196	11.74
25.0-29.9	151	25,012	6.04	10	1,641	6.09	11	1,540	7.14	38	4,026	9.44	10	602	16.61	31	2,970	10.44
30.0-34.9	63	13,076	4.82	2	654	3.06	12	841	14.27	7	1,337	5.24	3	215	13.95	10	936	10.68
35.0-39.9	33	4,407	7.49	1	161	6.21	3	321	9.35	6	378	15.87	2	61	32.79	4	238	16.81
40 and more	14	1,511	9.27	0	51	0.00	0	130	0.00	4	116	34.48	0	11	0.00	2	72	27.78
Asian Classification																		
<16.0	1	737	1.36	1	40	25.00	0	101	0.00	0	35	0.00	1	5	200.00	1	34	29.41
16.0-18.4	32	6,804	4.70	2	464	4.31	2	474	4.22	5	622	8.04	1	83	12.05	2	626	3.19
18.5-22.9	128	20,500	6.24	11	1,774	6.20	15	1,161	12.92	35	3,299	10.61	2	460	4.35	36	3,097	11.62
23.0-27.4	182	28,868	6.30	13	2,244	5.79	14	1,722	8.13	57	5,580	10.22	13	826	15.74	51	4,223	12.08
27.5-32.5	99	17,947	5.52	7	971	7.21	11	1,164	9.45	17	2,247	7.57	3	342	8.77	11	1,551	7.09
32.6-37.5	38	6,891	5.51	0	292	0.00	7	465	15.05	3	634	4.73	3	100	30.00	7	417	16.79
>37.5	24	2,644	9.08	1	79	12.66	1	219	4.57	7	200	35.00	0	27	0.00	3	124	24.19

In 2014 stillbirth rates in Malay mothers were at 8.71 per 1000 live births with BMI 40 and more (WHO Classification). Indian mothers and foreigners had a higher stillbirth rate with a lower BMI of 35-39.9

Table 1.9b: Stillbirth rate in relation to WHO and Asian BMI classifications and Ethnicity 2014

BMI	2014																	
	Malay			Chinese			Indian			Indigenous			Others			Foreigner		
	SB	Live birth	SB Rate	SB	Live birth	SB Rate	SB	Live birth	SB Rate	SB	Live birth	SB Rate	n	Live birth	SB Rate	n	Live birth	SB Rate
WHO Classification	n	n		n	n		n	n		n	n		n	n		n	n	
<18.5	40	8,271	4.84	5	748	6.68	4	570	7.02	9	707	12.73	0	103	0.00	3	679	4.42
18.5-24.9	241	38,420	6.27	32	3,934	8.13	20	2,103	9.51	65	6,366	10.21	6	879	6.83	60	5,574	10.76
25.0-29.9	164	28,991	5.66	14	2,099	6.67	17	1,779	9.56	26	4,498	5.78	9	589	15.28	20	3,459	5.78
30.0-34.9	88	14,923	5.90	7	840	8.33	10	942	10.62	13	2,104	6.18	3	317	9.46	13	1,174	11.07
35.0-39.9	31	5,255	5.90	2	258	7.75	4	358	11.17	5	654	7.65	1	112	8.93	5	289	17.30
40 and more	16	1,837	8.71	0	69	0.00	0	139	0.00	2	213	9.39	0	36	0.00	0	118	0.00
Asian Classification																		
<16.0	3	814	3.69	0	46	0.00	1	99	10.10	1	48	20.83	0	6	0.00	0	43	0.00
16.0-18.4	37	7,457	4.96	5	702	7.12	3	471	6.37	8	659	12.14	0	97	0.00	3	636	4.72
18.5-22.9	143	23,565	6.07	19	2,479	7.66	9	1,261	7.14	43	3,812	11.28	4	551	7.26	31	3,382	9.17
23.0-27.4	207	33,603	6.16	23	2,897	7.94	23	1,994	11.53	39	5,498	7.09	10	718	13.93	46	4,605	9.99
27.5-32.5	115	20,912	5.50	11	1,281	8.59	12	1,281	9.37	16	3,093	5.17	4	425	9.41	14	1,924	7.28
32.6-37.5	50	8,133	6.15	2	421	4.75	7	556	12.59	11	1,063	10.35	1	171	5.85	5	513	9.75
>37.5	25	3,213	7.78	0	122	0.00	0	229	0.00	2	369	5.42	0	68	0.00	2	190	10.53

In 2015 there was no correlation between stillbirth and BMI among Malay and Chinese mothers,Malay.The foreigners had a stillbirth rate of 14.93 per 1000 livebirths with BMI >37.5(Asian classification)

Table 1.9c: Stillbirth rate in relation to WHO and Asian BMI classifications and Ethnicity 2015

BMI	2015																	
	Malay			Chinese			Indian			Indigenous			Others			Foreigner		
	SB	Live birth	SB Rate	SB	Live birth	SB Rate	SB	Live birth	SB Rate	SB	Live birth	SB Rate	n	Live birth	SB Rate	n	Live birth	SB Rate
WHO Classification	n	n		n	n		n	n		n	n		n	n		n	n	
<18.5	34	6,917	4.92	0	554	0.00	2	487	4.11	4	523	7.65	1	58	17.24	4	444	9.01
18.5-24.9	244	45,986	5.31	25	4,842	5.16	26	2,361	11.01	54	7,792	6.93	1	466	2.15	42	4,700	8.94
25.0-29.9	178	30,688	5.80	10	2,264	4.42	23	1,885	12.20	37	5,030	7.36	4	381	10.50	28	2,728	10.26
30.0-34.9	80	15,758	5.08	0	889	0.00	10	1,011	9.89	21	2,304	9.11	1	185	5.41	10	882	11.34
35.0-39.9	39	5,637	6.92	0	259	0.00	5	351	14.25	4	766	5.22	0	53	0.00	3	226	13.27
40 and more	14	2,221	6.30	0	88	0.00	1	147	6.80	0	291	0.00	1	21	47.62	1	74	13.51
Asian Classification																		
<16.0	8	832	9.62	0	53	0.00	1	103	9.71	0	40	0.00	1	3	333.33	1	25	40.00
16.0-18.4	26	6,085	4.27	0	501	0.00	1	384	2.60	4	483	8.28	0	55	0.00	3	419	7.16
18.5-22.9	155	30,029	5.16	16	3,310	4.83	11	1,512	7.28	34	4,927	6.90	1	310	3.23	24	3,011	7.97
23.0-27.4	186	33,319	5.58	13	2,904	4.48	24	1,911	12.56	43	5,666	7.59	4	381	10.50	40	3,307	12.10
27.5-32.5	130	23,572	5.52	6	1,496	4.01	19	1,471	12.92	27	3,756	7.19	1	270	3.70	13	1,710	7.60
32.6-37.5	58	9,213	6.30	0	472	0.00	9	585	15.38	11	1,272	8.65	0	112	0.00	5	448	11.16
>37.5	26	4,157	6.25	0	160	0.00	2	276	7.25	1	562	1.78	1	33	30.30	2	134	14.93

Size of baby at birth and Stillbirth

Table 1.10a-1.10c shows the trend of stillbirth between the period 2013 to 2015. Stillbirth rates were high in babies weighing less than 2000g in all the 3 years. The babies with the highest stillbirth rates were those with extremely low birth weight of less than 1000g at 338.43 per 1000 livebirths in 2013, 342.03 per 1000 livebirths in 2014 and 321.22 per 1000 live births in 2015.

Table 1.10a: Trends in Stillbirth rate from Malaysian Tertiary hospitals 2013

Birth Weight	2013				
	Total Deliveries	FSB	MSB	Live birth	SB Rate
	n	n	n	n	
< 1000	1,313	108	224	981	338.43
1000 - 1500	1,362	39	95	1,228	109.12
1501 - 2000	3,445	29	90	3,326	35.78
2001 - 2500	14,032	38	74	13,920	8.05
2501 - 3000	42,686	31	48	42,607	1.85
3001 - 3500	41,014	16	26	40,972	1.03
3501 - 4000	11,630	5	8	11,617	1.12
> 4000	2,524	3	12	2,509	5.98
NA	4,090	0	3	4,087	0.00

Table 1.10b: Trends in Stillbirth rate from Malaysian Tertiary hospitals 2014

Birth Weight	2014				
	Total Deliveries	FSB	MSB	Live birth	SB Rate
	n	n	n	n	
< 1000	1,440	103	264	1,073	342.03
1000 - 1500	1,471	29	95	1,347	92.06
1501 - 2000	3,950	43	92	3,815	35.39
2001 - 2500	16,175	39	74	16,062	7.04
2501 - 3000	50,337	34	65	50,238	1.97
3001 - 3500	52,408	23	57	52,328	1.53
3501 - 4000	13,039	3	13	13,023	1.23
> 4000	2,837	2	13	2,822	5.32
NA	0	0	0	0	0.00

Table 1.10c: Trends in Stillbirth rate from Malaysian Tertiary hospitals 2015

Birth Weight	2015				
	Total Deliveries	FSB	MSB	Live birth	SB Rate
	n	n	n	n	
< 1000	1,563	135	245	1,183	321.22
1000 - 1500	1,597	41	94	1,462	92.34
1501 - 2000	4,186	45	69	4,072	28.00
2001 - 2500	17,868	37	64	17,767	5.68
2501 - 3000	54,026	30	44	53,952	1.37
3001 - 3500	49,631	17	32	49,582	0.99
3501 - 4000	13,605	4	15	13,586	1.40
> 4000	2,794	7	9	2,778	5.76
NA	5,998	11	13	0	0.00

Multiple Births and Stillbirths

Figure 1.5: Trends of stillbirth by type of pregnancy

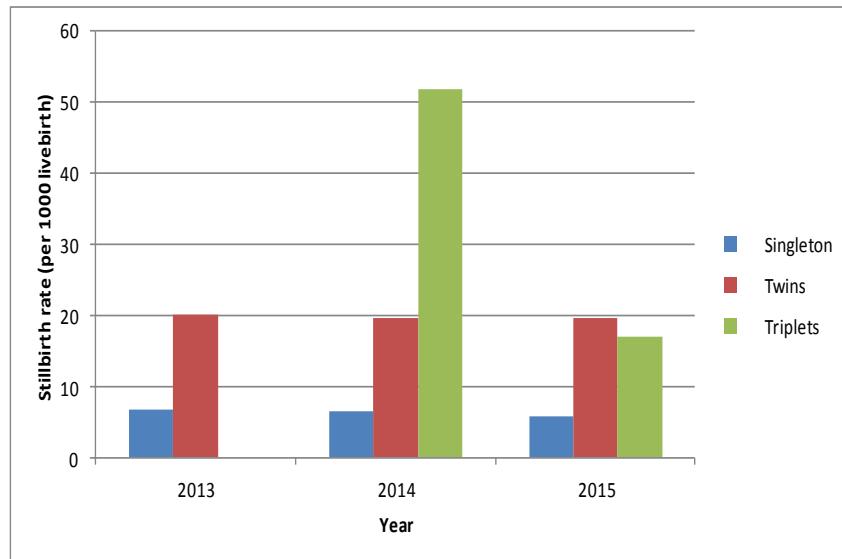


Table 1.11: Trend of Stillbirth rate in relation to type of pregnancy 2013 - 2015

Pregnancy	2013					2014					2015				
	Total Deliveries	FSB	MSB	Live birth	SB Rate	Total Deliveries	FSB	MSB	Live birth	SB Rate	Total Deliveries	FSB	MSB	Live birth	SB Rate
	n	n	n	n		n	n	n	n		n	n	n	n	
Singleton	119,476	255	544	118,677	6.73	138,696	256	634	137,806	6.46	148,246	310	544	147,392	5.79
Twins	2,530	14	36	2,480	20.16	2,856	18	37	2,801	19.64	2,958	16	41	2,901	19.65
Triplets	90	0	0	90	0.00	81	2	2	77	51.95	60	1	0	59	16.95

Multiple births have a higher risk of stillbirths. Twins had a stillbirth rate of 20.16 per 1000 live births in 2013. The rates were similar in 2014 and 2015. In 2014 triplets had a stillbirth rate of 51.95 per 1000 live births and 16.95 per 1000 live births in 2015.

In 2013 and 2015 stillbirth rates in twin babies were the highest among indigenous mothers. In 2014 the rates were slightly higher among Chinese mothers. In 2014 and 2015 the stillbirth rates in triplet babies were the highest among Indian mothers.

Table 1.12a: Trends of Stillbirth Rate by Ethnicity 2013

2013	Malay			Chinese			Indian			Indigenous			Others			Foreigner		
Pregnancy	SB	Live birth	SB Rate	SB	Live birth	SB Rate	SB	Live birth	SB Rate	SB	Live birth	SB Rate	SB	Live birth	SB Rate	SB	Live birth	SB Rate
	n	n		n	n		n	n		n	n		n	n		n	n	
Singleton	477	83,181	5.73	33	5,712	5.78	47	5,174	9.08	111	12,402	8.95	21	1,804	11.64	109	9,861	11.05
Twins	28	1,642	17.05	2	160	12.50	3	135	22.22	13	259	50.19	2	40	50.00	2	230	8.70
Triplets	0	30	0.00	0	9	0.00	0	18	0.00	0	9	0.00	0	9	0.00	0	15	0.00

Table 1.12b: Trends of Stillbirth Rate by Ethnicity 2014

2014	Malay			Chinese			Indian			Indigenous			Others			Foreigner		
Pregnancy	SB	Live birth	SB Rate	SB	Live birth	SB Rate	SB	Live birth	SB Rate	SB	Live birth	SB Rate	SB	Live birth	SB Rate	SB	Live birth	SB Rate
	n	n		n	n		n	n		n	n		n	n		n	n	
Singleton	554	96,228	5.76	54	7,789	6.93	52	5,755	9.04	111	14,313	7.76	18	1,994	9.03	94	11,094	8.47
Twins	32	1,884	16.99	6	182	32.97	2	164	12.20	9	285	31.58	1	47	21.28	5	227	22.03
Triplets	0	51	0.00	0	6	0.00	2	4	500.00	0	6	0.00	-	-	-	2	10	200.00

Table 1.12c: Trends of Stillbirth Rate by Ethnicity 2015

2015	Malay			Chinese			Indian			Indigenous			Others			Foreigner		
Pregnancy	SB	Live birth	SB Rate	SB	Live birth	SB Rate	SB	Live birth	SB Rate	SB	Live birth	SB Rate	SB	Live birth	SB Rate	SB	Live birth	SB Rate
	n	n		n	n		n	n		n	n		n	n		n	n	
Singleton	565	105,272	5.37	33	8,613	3.83	60	6,099	9.84	101	16,334	6.18	8	1,142	7.01	82	8,877	9.24
Twins	24	1,912	12.55	1	267	3.75	7	143	48.95	19	365	52.05	0	22	0.00	6	178	33.71
Triplets	0	39	0.00	1	17	58.82	-	-	-	0	3	0.00	-	-	-	-	-	-

Births at different Gestation and Stillbirth

Stillbirth rates were high in preterm babies between 2013 to 2015. The rates after 2013 are in a downward. Stillbirth rates were 9 to 10x higher in preterm babies compared to post terms babies. Twins and triplet babies had a higher stillbirth rate compared to singleton pregnancies.

Table 1.13a: Stillbirth rate in relation to period of gestation 2013

Period of Gestation	2013				
	Total Deliveries	FSB	MSB	Live birth	SB Rate
	n	n	n	n	
Preterm	13,625	166	406	13,053	43.82
Term	101,274	60	118	101,096	1.76
Post term	1,674	2	5	1,667	4.20

Table 1.13b: Stillbirth rate in relation to period of gestation 2014

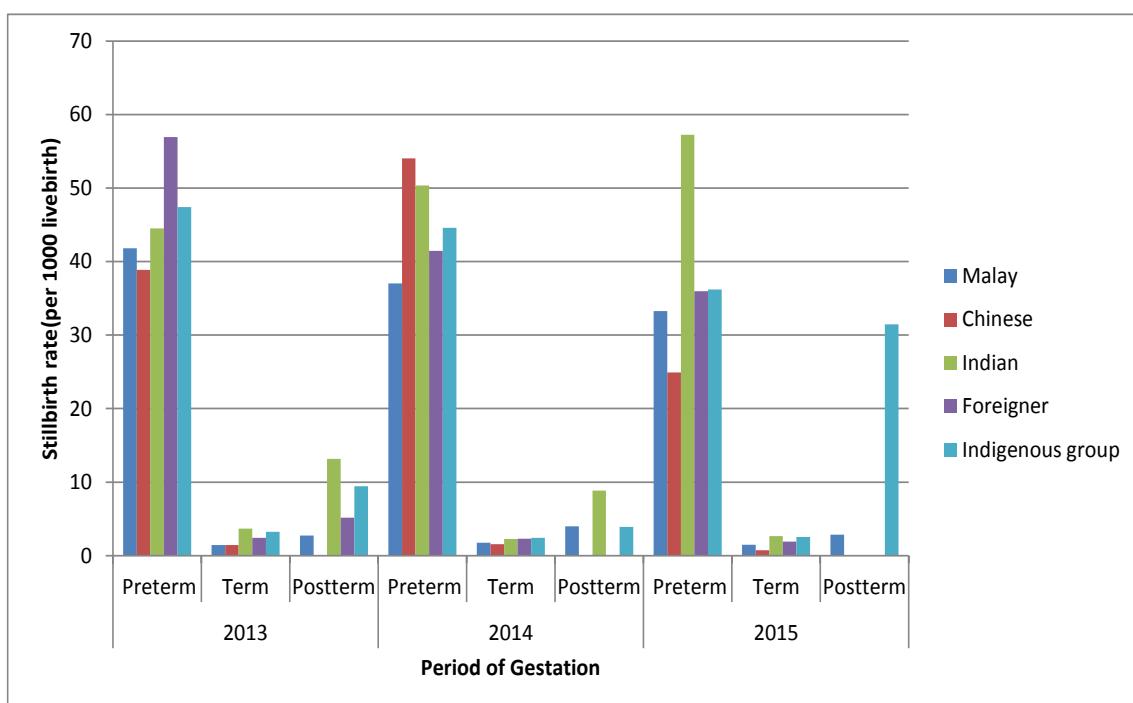
Period of Gestation	2014				
	Total Deliveries	FSB	MSB	Live birth	SB Rate
	n	n	n	n	
Preterm	15,464	169	424	14,871	39.88
Term	115,401	60	154	115,187	1.86
Post term	2,279	3	5	2,271	3.52

Table 1.13c: Stillbirth rate in relation to period of gestation 2015

Period of Gestation	2015				
	Total Deliveries	FSB	MSB	Live birth	SB Rate
	n	n	n	n	
Preterm	17,144	194	375	16,575	34.33
Term	119,923	67	123	119,733	1.59
Post term	1,991	3	6	1,982	4.54

All mothers with preterm babies had a high stillbirth rate during the study period.
Indian mothers with post term babies had a higher stillbirth rate compared to other ethnicity in 2013 and 2014.

Figure 1.6: Distribution of Period of Gestation and Stillbirth by Ethnicity 2013 – 2015



Baby Gender and Stillbirth

Stillbirth rates in Male and female babies were similar. Babies with ambiguous genitalia had a higher stillbirth rate. Studies have shown that babies with congenital anomalies have a higher stillbirth rate. Need further analysis to see if these babies with ambiguous genitalia had congenital anomalies.

Table 1.14a: Stillbirth rate and Baby gender 2013

Baby Gender	2013				
	Total Deliveries	FSB	MSB	Live birth	SB Rate
	n	n	n	n	
Male	61,591	131	319	61,141	7.36
Female	56,471	129	239	56,103	6.56
Ambiguous/ Indeterminate	86	8	17	61	409.84

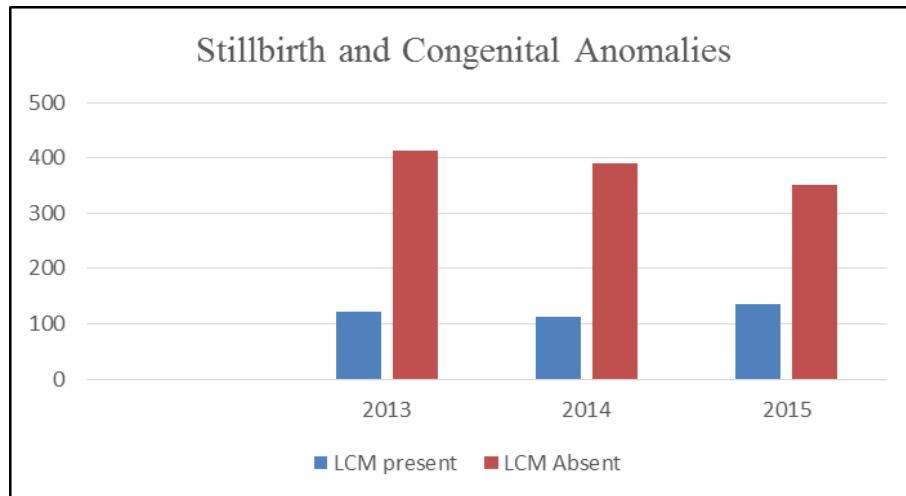
Table 1.14b: Stillbirth rate and Baby gender 2014

Baby Gender	2014				
	Total Deliveries	FSB	MSB	Live birth	SB Rate
	n	n	n	n	
Male	71,608	127	351	71,130	6.72
Female	66,302	138	290	65,874	6.50
Ambiguous/ Indeterminate	87	6	27	54	611.11

Table 1.14c: Stillbirth rate and Baby gender 2015

Baby Gender	2015				
	Total Deliveries	FSB	MSB	Live birth	SB Rate
	n	n	n	n	
Male	76,252	167	305	75,780	6.23
Female	71,166	143	258	70,765	5.67
Ambiguous/ Indeterminate	82	14	17	51	607.84

Figure 1.7: Number of stillbirths in relation to LCM



Cause of Stillbirth

Stillbirth rates were higher in women with anemia at delivery. In 2013 the rates were 19.04 per 1000 livebirths twice the rate of mothers with anaemia at booking. In 2014 the rates were down to 8.63 per 1000 livebirths and in 2015 at 6.10 per 1000 livebirths. There was not much of difference in the stillbirth rates with anemia at booking and anemia at delivery in the subsequent 2 years. Mothers with Diabetes in pregnancy had a stillbirth rate of 7.12 per 1000 livebirths in 2013, 6.53 per 1000 livebirths in 2014 and 6.38 per 1000 livebirths in 2015. The rates were higher in mothers with preexisting Diabetes Mellitus (DM) as compared to those with Gestational Diabetes Mellitus(GDM). In 2013 the rates were 6 folds higher in mothers with preexisting DM than in mothers with GDM and in 2015 the rates were 3 folds higher in preexisting DM compared to those with GDM.

In 2013 the stillbirth rates in women with heart disease was 2.99 per 1000 livebirths. The rates were much higher in 2014 and 2015 at 11.06 and 13.16 per 1000 livebirths. Stillbirth rates were also high in women with TB in 2013 and 2015 at 30.77 and 14.93 per 1000 livebirths. Women with renal disease complicating pregnancy had a high stillbirth rare in all the 3 years with an increasing trend from 2013. In 2013 the stillbirth rates in women with heart disease was 2.99 per 1000 livebirths. The rates were much higher in 2014 and 2015 at 11.06 and 13.16 per 1000 livebirths. Stillbirth rates were higher in women with anemia at delivery. In 2013 the rates were 19.04 per 1000 livebirths and 2014 the rates were down to 8.63 per 1000 livebirths and in 2015 at 6.10 per 1000 livebirths. Stillbirth rates were also high in women with TB in 2013 and 2015 at 30.77 and 14.93 per 1000 livebirths.

Table 1.15a: Stillbirth in relation to Medical Disorders 2013

Medical Disorders	2013				
	Total Deliveries	FSB	MSB	Live birth	SB Rate
	n	n	n	n	
Anaemia					
Anaemia booking	4,155	11	23	4,121	8.25
Anaemia delivery	1,124	10	11	1,103	19.04
None	103,194	228	466	102,500	6.77
Diabetes	10,749	19	57	10,673	7.12
Pre-existing	801	0	6	795	7.55
Gestational	9,921	19	51	9,851	7.11
Hypertension	4,549	15	49	4,485	14.27
Pre-existing	906	1	12	893	14.56
Gestational	3,202	10	31	3,161	12.97
Pre-eclampsia	748	5	11	732	21.86
Eclampsia	47	0	1	46	21.74
Heart Disease	672	0	2	670	2.99
NYHA I	338	0	2	336	5.95
NYHA II	66	0	0	66	0.00
Others	5,240	12	31	5,197	8.27
TB	67	0	2	65	30.77
Blood disorder	1,069	0	5	1,064	4.70
Thalassemia	537	0	1	536	1.87
Collagen Disease	5	0	0	5	0.00
Asthma	1,870	5	11	1,854	8.63
Renal disease	39	0	1	38	26.32

Table 1.15b: Stillbirth in relation to Medical Disorders 2014

Medical Disorders	2014				
	Total Deliveries	FSB	MSB	Live birth	SB Rate
	n	n	n	n	
Anaemia					
Anaemia booking	22,710	45	110	22,555	6.87
Anaemia delivery	7,948	24	44	7,880	8.63
None	120,138	233	538	119,367	6.46
Diabetes	12,640	18	64	12,558	6.53
Pre-existing	496	1	6	489	14.31
Gestational	12,088	17	57	12,014	6.16
Hypertension	4,475	19	57	4,399	17.28
Pre-existing	783	3	6	774	11.63
Gestational	3,212	11	40	3,161	16.13
Pre-eclampsia	683	6	11	666	25.53
Eclampsia	56	0	1	55	18.18
Heart Disease	640	1	6	633	11.06
NYHA I	316	1	2	313	9.58
NYHA II	38	0	0	38	0.00
Others	6,269	13	38	6,218	8.20
TB	76	0	0	76	0.00
Blood disorder	1,825	4	10	1,811	7.73
Thalassemia	581	2	3	576	8.68
Collagen Disease	5	0	0	5	0.00
Asthma	2,234	4	7	2,223	4.95
Renal disease	42	0	1	41	24.39

Table 1.15c: Stillbirth in relation to Medical Disorders 2015

Medical Disorders	2015				
	Total Deliveries	FSB	MSB	Live birth	SB Rate
	n	n	n	n	
Anaemia					
Anaemia booking	22,061	56	85	21,920	6.43
Anaemia delivery	8,088	20	29	8,039	6.10
None	131,913	273	484	131,156	5.77
Diabetes	11,669	25	49	11,595	6.38
Pre-existing	363	4	3	356	19.66
Gestational	11,232	20	46	11,166	5.91
Hypertension	4,086	28	45	4,013	18.19
Pre-existing	754	5	10	739	20.30
Gestational	2,811	19	29	2,763	17.37
Pre-eclampsia	626	8	11	607	31.30
Eclampsia	54	1	0	53	18.87
Heart Disease	539	4	3	532	13.16
NYHA I	263	1	2	260	11.54
NYHA II	35	0	0	35	0.00
Others	5,085	6	26	5,053	6.33
TB	68	0	1	67	14.93
Blood disorder	1,505	1	11	1,493	8.04
Thalassemia	586	0	4	582	6.87
Collagen Disease	3	0	0	3	0.00
Asthma	1,964	4	6	1,954	5.12
Renal disease	67	0	2	65	30.77

In 2013, GDM contributed to higher stillbirth rates in Malay, Chinese, foreigners and others while pre-existing DM contributed to high stillbirth rates in Indians and Indigenous mothers. Chinese women with pre-existing hypertension had a higher stillbirth rate in 2013 at 80 per 1000 livebirths. Preeclampsia was associated with higher stillbirth rates in Indian and Indigenous mothers in 2013. There were no stillbirths in Malaysians with Eclampsia, but the rate was high in foreigners in all the three years. Indian mothers with heart disease had a stillbirth rate of 41.67 per 1000 live births. Stillbirth rates were high in Indian mothers with preeclampsia, preexisting DM, heart disease and thalassemia in 2013.

Table 1.16a: Stillbirth rate in relation to Medical Problems by Ethnicity 2013

Medical Problems	2013														
	Malay			Chinese			Indian			Foreigner			Indigenous group		
	n	Live birth	SB Rate	n	Live birth	SB Rate	n	Live birth	SB Rate	n	Live birth	SB Rate	n	Live birth	SB Rate
Anaemia															
Anaemia booking	9	2,267	3.97	1	144	6.94	6	482	12.45	5	509	9.82	13	689	18.87
Anaemia delivery	9	602	14.95	1	40	25	1	102	9.8	5	157	31.85	5	198	25.25
None	400	70,680	5.66	26	4,848	5.36	41	4,207	9.75	101	9,136	11.06	125	13135	9.52
Diabetes	60	8,110	7.4	2	585	3.42	3	691	4.34	2	503	3.98	9	758	11.87
Pre-existing	4	595	6.72	0	49	0	1	69	14.49	0	26	0	1	53	18.87
Gestational	56	7,494	7.47	2	533	3.75	2	622	3.22	2	476	4.2	8	705	11.35
Hypertension	38	3,502	10.85	5	203	24.63	2	152	13.16	8	212	37.74	11	393	27.99
Pre-existing	7	684	10.23	4	50	80	0	27	0	1	30	33.33	1	98	10.20
Gestational	25	2,465	10.14	1	137	7.3	1	114	8.77	6	163	36.81	8	266	30.08
Pre-eclampsia	10	531	18.83	0	34	0	1	39	25.64	1	45	22.22	4	78	51.28
Eclampsia	0	31	0	-	-	-	0	8	0	1	4	250	0	2	0.00
Heart Disease	1	510	1.96	0	36	0	1	24	41.67	0	44	0	0	53	0.00
NYHA I	1	248	4.03	0	15	0	1	10	100	0	27	0	0	36	0.00
NYHA II	0	59	0	0	1	0	0	1	0	-	-	-	0	4	0.00
Others	30	3,867	7.76	5	323	15.48	5	375	13.33	1	286	3.5	2	327	6.12
TB	2	27	74.07	0	3	0	0	6	0	0	11	0	0	16	0.00
Blood Disorder	3	733	4.09	1	101	9.9	1	69	14.49	0	72	0	0	86	0.00
Thalassemia		411	0	0	53	0	1	7	142.86		11	0	0	53	0.00
Collagen Disease	0	5	0	0	0	0	0	0	0	-	-	-	0	0	0.00
Asthma	12	1,485	8.08	1	76	13.16	2	139	14.39	0	52	0	1	96	10.42
Renal Disease	1	27	37.04	0	3	0	0	2	0	0	1	0	0	5	0.00

In 2014 among Malaysians, only Malay mothers with preexisting DM had a stillbirth rate of 15.79 per 1000 live births about 2x more than with GDM. Stillbirth rate in foreigners with preexisting Diabetes was 58.82 per 1000 livebirths. In 2014 all women with preeclampsia had a high stillbirth rate, the highest among Indian mothers. In 2014 Chinese mothers with anaemia at booking and delivery, heart disease and thalassemia had a higher stillbirth rate among the 3 major ethnic groups.

Table 1.16b: Stillbirth rate in relation to Medical Problems by Ethnicity 2014

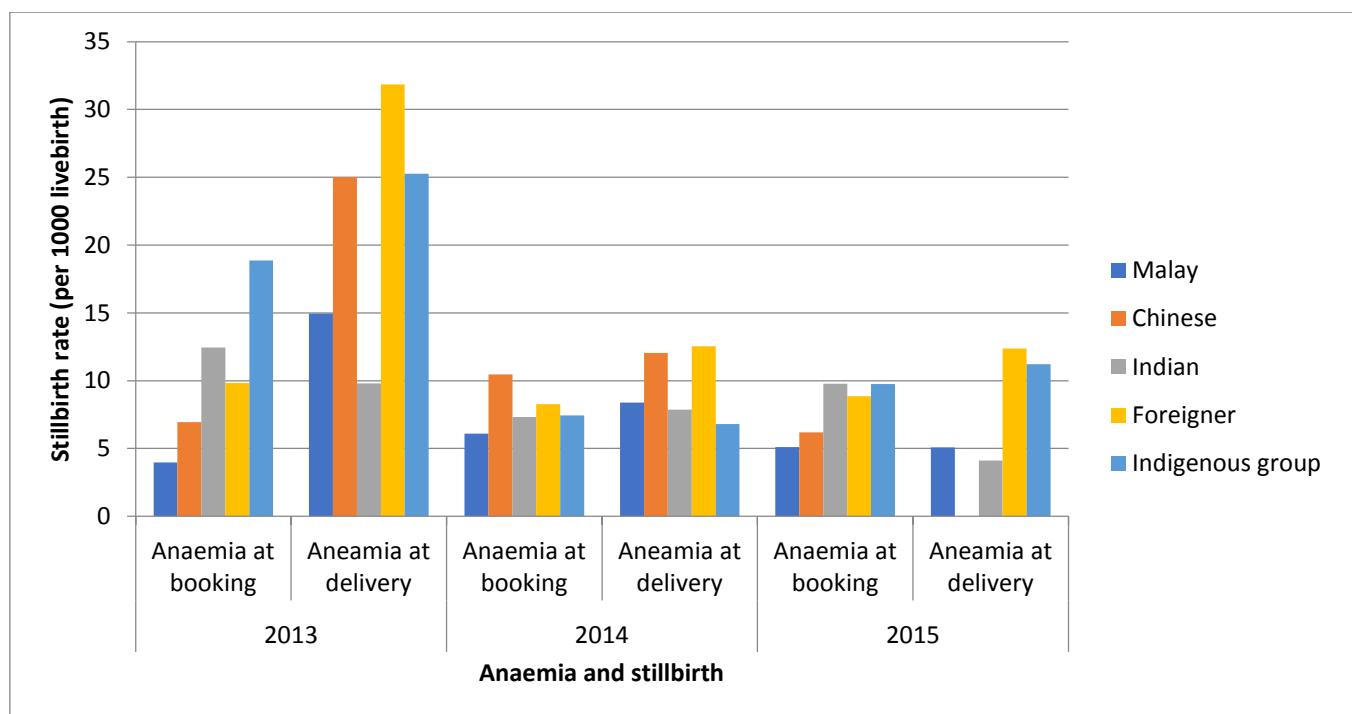
Medical Problems	2014														
	Malay			Chinese			Indian			Foreigner			Indigenous group		
	n	Live birth	SB Rate	n	Live birth	SB Rate	n	Live birth	SB Rate	n	Live birth	SB Rate	n	Live birth	SB Rate
Anaemia															
Anaemia at booking	87	14,279	6.09	13	1,243	10.46	12	1,636	7.33	19	2,295	8.28	22	2,957	7.44
Anaemia at delivery	46	5,480	8.39	3	249	12.05	3	381	7.87	9	718	12.53	7	1,028	6.81
None	457	82,572	5.53	52	6,730	7.73	41	4,845	8.46	86	10,294	8.35	128	14,332	8.93
Diabetes	65	9,138	7.11	2	770	2.6	8	724	11.05	5	546	9.16	2	1,346	1.49
Pre-existing	6	380	15.79	0	18	0	0	46	0	1	17	58.82	0	28	0.00
Gestational	58	8,709	6.66	2	750	2.67	8	676	11.83	4	529	7.56	2	1,316	1.52
Hypertension	53	3,230	16.41	4	229	17.47	6	104	57.69	7	230	30.43	6	592	10.14
Pre-existing	6	590	10.17	0	38	0	1	20	50	1	32	31.25	1	93	10.75
Gestational	37	2,278	16.24	2	169	11.83	3	76	39.47	5	175	28.57	4	453	8.83
Pre-eclampsia	11	474	23.21	1	43	23.26	1	17	58.82	2	42	47.62	2	88	22.73
Eclampsia	0	31	0	0	1	0	0	3	0	1	11	90.91	0	9	0.00
Heart Disease	5	473	10.57	1	26	38.46	0	27	0	1	29	34.48	0	78	0.00
NYHA I	2	229	8.73	0	13	0	0	13	0	1	15	66.67	0	43	0.00
NYHA II	0	29	0	0	2	0	0	1	0	0	2	0	0	4	0.00
Others	40	4,660	8.58	1	348	2.87	4	330	12.12	3	298	10.07	3	571	5.25
TB	0	43	0	0	4	0	0	3	0	0	8	0	0	17	0.00
Blood Disorder	9	1,197	7.52	1	124	8.06	0	110	0	2	137	14.6	2	238	8.40
Thalassemia	4	424	9.43	1	65	15.38		4	0		13	0	0	70	0.00
Collagen Disease	0	3	0	0	1	0	-	-	-	0	0	0	0	1	0.00
Asthma	8	1,778	4.5	0	86	0	2	127	15.75	0	55	0	1	175	5.71
Renal Disease	1	32	31.25	0	1	0	-	-	-	0	2	0	0	6	0.00

In 2015 Malay mothers with preexisting Diabetes had stillbirth which was 4x more than with GDM while in Foreigners stillbirth rates were 20x more in mothers with preexisting DM then in mothers with GDM. The stillbirth rate with foreigners with preexisting Diabetes was 142.86 per 1000 livebirths. In 2015, Malay mothers with heart disease had a high stillbirth rate at 16.57 per 1000 livebirths. In all 3 years Malay women with TB had a high stillbirth rate

Table 1.16c: Stillbirth rate in relation to Medical Problems by Ethnicity 2015

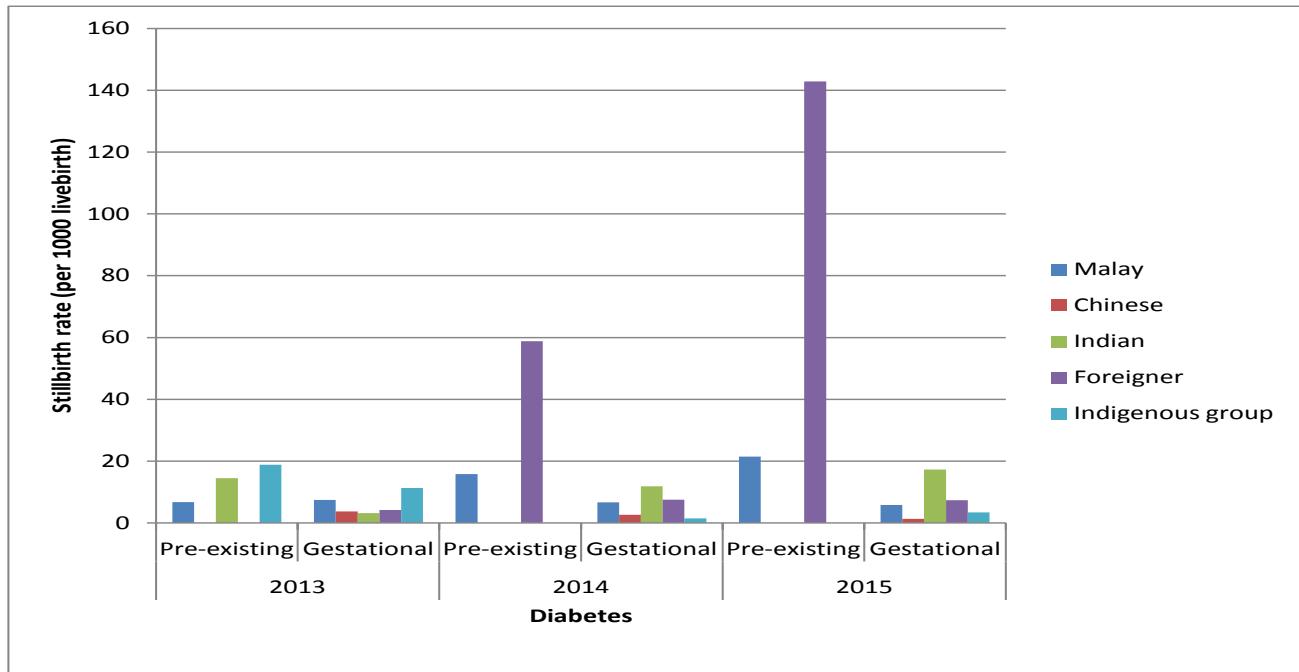
Medical Problems	2015														
	Malay			Chinese			Indian			Foreigner			Indigenous group		
	n	Live birth	SB Rate	n	Live birth	SB Rate	n	Live birth	SB Rate	n	Live birth	SB Rate	n	Live birth	SB Rate
Anaemia															
Anaemia at booking	72	14,129	5.1	8	1,290	6.2	16	1,636	9.78	16	1,803	8.87	28	2,867	9.77
Anaemia at delivery	30	5,894	5.09	0	235	0	2	487	4.11	6	485	12.37	10	892	11.21
None	484	93,208	5.19	30	7,705	3.89	55	5,371	10.24	77	8,265	9.32	106	15,645	6.78
Diabetes	54	8,558	6.31	1	752	1.33	10	616	16.23	4	418	9.57	5	1,191	4.20
Pre-existing	6	279	21.51	0	11	0	0	33	0	1	7	142.86	0	23	0.00
Gestational	48	8,219	5.84	1	739	1.35	10	579	17.27	3	407	7.37	4	1,166	3.43
Hypertension	46	2,922	15.74	1	207	4.83	4	109	36.7	7	162	43.21	15	587	25.55
Pre-existing	10	547	18.28	1	46	21.74	1	21	47.62	1	20	50	2	103	19.42
Gestational	26	1,969	13.2	0	138	0	3	71	42.25	6	126	47.62	13	438	29.68
Pre-eclampsia	9	427	21.08	0	32	0	0	20	0	1	27	37.04	9	96	93.75
Eclampsia	0	34	0	0	1	0	0	5	0	1	5	200	0	7	0.00
Heart Disease	6	362	16.57	0	32	0	0	16	0	0	26	0	1	93	10.75
NYHA I	3	168	17.86	0	13	0	0	2	0	0	18	0	0	58	0.00
NYHA II	0	27	0	0	1	0	0	3	0	-	-	-	0	4	0.00
Others	22	3,678	5.98	3	311	9.65	3	200	15	1	235	4.26	3	599	5.01
TB	1	41	24.39	0	2	0	0	2	0	0	11	0	0	10	0.00
Blood Disorder	5	964	5.19	1	96	10.42	2	67	29.85	1	109	9.17	3	247	12.15
Thalassemia	2	426	4.69	1	61	16.39		8	0		7	0	1	74	13.51
Collagen Disease	0	3	0	0	0	0	0	0	0	-	-	-	0	0	0.00
Asthma	8	1,514	5.28	0	89	0	2	98	20.41	0	39	0	0	200	0.00
Renal Disease	2	44	45.45	0	5	0	0	2	0	0	1	0	0	13	0.00

Figure 1.8: Stillbirth in relation to Anaemia and Ethnicity 2013-2015



Stillbirth rates were higher in women with anaemia at delivery. In 2013 the rates were 19.04 per 1000 livebirths and 2014 the rates were down to 8.63 per 1000 livebirths and in 2015 at 6.10 per 1000 livebirths. Foreigners had a higher stillbirth rate from 2013 to 2015 with anaemia at the time of delivery compared to Malaysian mothers.

Figure 1.9: Stillbirth in relation to Diabetes and Ethnicity 2013-2015



Women with Diabetes in pregnancy had a stillbirth rate of 7.12 per 1000 livebirths in 2013, 6.53 per 1000 livebirths in 2014 and 6.38 per 1000 livebirths in 2015. The rates were higher in women with preexisting Diabetes Mellitus as compared to those with Gestational Diabetes Mellitus. In 2013 the rates were 6 folds higher in women with preexisting Diabetes Mellitus than in women with Gestational Diabetes Mellitus and in 2015 the rates were 3 folds higher in preexisting Diabetes Mellitus compared to women with Gestational Diabetes Mellitus. In 2013 pre-existing Diabetes contributed to high stillbirth rates in Indians and Indigenous women. In 2014 and 2015 stillbirth rates were high in Malay women and foreigners.

In 2013, GDM contributed to higher still birth rate in Malay, Chinese, foreigners and others. But in 2014 and 2015 the stillbirth rates were high in Malay women and foreigners with GDM. Malay and Chinese women with pre-existing hypertension had a higher stillbirth rate in 2013.

Risk of Stillbirth

In 2013 foreigners with HIV had a stillbirth rate of 41.67 per 1000 livebirths. In 2013 and 2014 Malay mothers with HIV and syphilis had babies that were stillborn. Indigenous mothers with syphilis had a stillbirth rate of 83.33 per 1000 livebirths in 2015. In 2014 foreigners with syphilis had a stillbirth rate of 13.51 per 1000 livebirths and 34.46 per 1000 livebirths in 2015.

Table 1.17: Trends of Stillbirth with STI 2013 - 2015

Medical Problems	Malay			Chinese			Indian			Foreigner			Indigenous		
	n	Live birth	SB Rate	n	Live birth	SB Rate	n	Live birth	SB Rate	n	Live birth	SB Rate	n	Live birth	SB Rate
HIV	2013														
Reactive	2	144	13.89	0	11	0	0	14	0	1	24	41.67	0	27	0
Non-reactive	485	83,143	5.83	32	5,651	5.66	47	5,219	9.01	93	9,800	9.49	145	14130	10.26
Syphilis	2014														
Yes	1	133	7.52	0	8	0	0	12	0	0	43	0	0	25	0
No	478	82,305	5.81	32	5,599	5.72	47	5,127	9.17	87	9,515	9.14	142	14074	10.09
HIV	2014														
Reactive	0	84	0	0	7	0	0	8	0	0	13	0	0	19	0
Non-reactive	547	94,989	5.76	56	7,425	7.54	53	5,854	9.05	91	10,804	8.42	123	15,034	8.18
Syphilis	2015														
Yes	0	179	0	0	11	0	0	19	0	1	74	13.51	1	114	8.77
No	527	93,374	5.64	55	7,341	7.49	52	5,756	9.03	87	10,513	8.28	123	14,839	8.29
HIV	2015														
Reactive	1	70	14.29	0	9	0	0	3	0	0	18	0	0	8	0
Non-reactive	564	102,693	5.49	32	7,987	4.01	63	6,131	10.28	75	8,637	8.68	119	15,743	7.56
Syphilis	2015														
Yes	1	212	4.72	0	15	0	1	12	83.33	1	26	38.46	0	46	0
No	556	101,316	5.49	32	7,877	4.06	62	6,028	10.29	73	8,482	8.61	0	15,589	0

Stillbirth and Social Habits

Table 1.18: Stillbirth rate in relation to social habits 2013 - 2015

Social habits	2013					2014					2015				
	Total Deliveries	FSB	MSB	Live birth	SB Rate	Total Deliveries	FSB	MSB	Live birth	SB Rate	Total Deliveries	FSB	MSB	Live birth	SB Rate
	n	n	n	n		n	n	n	n		n	n	n	n	
Smoking	544	1	1	542	3.69	434	1	4	429	11.66	484	2	3	479	10.44
Alcohol	34	0	0	34	0.00	31	0	1	30	33.33	29	1	1	27	74.07
Drugs	27	0	1	26	38.46	33	0	1	32	31.25	40	0	0	40	0.00

Table 1.19: Stillbirth rate by ethnicity in relation to social habits 2013 – 2015

Social habits	2013																	
	Malay			Chinese			Indian			Indigenous			Others			Foreigner		
	SB	Live birth	SB Rate	SB	Live birth	SB Rate	SB	Live birth	SB Rate	SB	Live birth	SB Rate	SB	Live birth	SB Rate	SB	Live birth	SB Rate
	n	n		n	n		n	n		n	n		n	n		n	n	
Smoking	2	384	5.21	0	35	0	0	22	0	0	67	0	0	6	0	0	26	0
Alcohol	0	13	0	0	4	0	0	4	0	0	7	0	-	-	-	0	6	0
Drugs	1	15	66.67	0	6	0	0	4	0	-	-	-	0	1	0	-	-	-
2014																		
Smoking	3	295	10.17	0	30	0	0	9	0	0	36	0	0	12	0	1	43	23.26
Alcohol	1	14	71.43	0	7	0	-	-	-	0	3	0	0	1	0	0	4	0
Drugs	1	24	41.67	0	1	0	-	-	-	0	2	0	0	2	0	0	3	0
2015																		
Smoking	2	355	5.63	1	17	58.82	0	11	0	1	62	16.13	0	6	0	1	27	37.04
Alcohol	0	15	0	1	3	333.33	0	2	0	1	3	333.33	-	-	-	0	4	0
Drugs	0	33	0	0	1	0	0	2	0	0	2	0	-	-	-	0	2	0

In all 3 years, complications resulting in stillbirth was the highest due to cord prolapse followed by APH. Stillbirth rate due to SGA were 13.04 per 1000 livebirths in 2013, 11.81 per 1000 livebirths in 2014 and 11.48 per 1000 livebirths in 2015.

Table 1.20: Stillbirth rate in relation to complications 2013 - 2015

Complications	2013					2014					2015				
	Total Deliveries	FSB	MSB	Live birth	SB Rate	Total Deliveries	FSB	MSB	Live birth	SB Rate	Total Deliveries	FSB	MSB	Live birth	SB Rate
	n	n	n	n		n	n	n	n		n	n	n	n	
SGA	24,006	70	239	23,697	13.04	27,420	77	243	27,100	11.81	28,108	102	217	27,789	11.48
IUGR	855	4	7	844	13.03	805	2	7	796	11.31	942	3	5	934	8.57
APH	230	5	2	223	31.39	160	3	2	155	32.26	79	4	0	75	53.33
Oligo hydramnious	297	0	1	296	3.38	357	0	0	357	0.00	379	1	1	377	5.31
Cord Prolapse	196	6	1	189	37.04	223	5	2	216	32.41	52	1	2	49	61.22
PPROM	163	1	1	161	12.42	1,114	3	5	1,106	7.23	1,052	5	2	1,045	6.70

Table 1.21: Stillbirth rate in relation to complications by ethnicity 2013 - 2015

Complications	2013																	
	Malay			Chinese			Indian			Indigenous			Others			Foreigner		
	SB	Live Birth	SB Rate	SB	Live birth	SB Rate	SB	Live birth	SB Rate	SB	Live birth	SB Rate	SB	Live birth	SB Rate	SB	Live birth	SB Rate
	n	n		n	n		n	n		n	n		n	n		n	n	
SGA	194	16,232	11.95	12	1,090	11.01	21	1,489	14.1	40	2,508	15.95	8	295	27.12	34	1,951	17.43
IUGR	6	611	9.82	1	38	26.32	2	69	28.99	2	63	31.75	0	6	0	0	53	0
APH	6	157	38.22	0	11	0	0	7	0	1	29	34.48	0	6	0	0	12	0
Oligo hydramnious	1	216	4.63	0	16	0	0	18	0	0	26	0	0	5	0	0	15	0
2014																		
Complications	Malay			Chinese			Indian			Indigenous			Others			Foreigner		
	SB	Live Birth	SB Rate	SB	Live Birth	SB Rate	SB	Live Birth	SB Rate	SB	Live Birth	SB Rate	SB	Live Birth	SB Rate	SB	Live Birth	SB Rate
	n	n		n	n		n	n		n	n		n	n		n	n	
SGA	208	18,431	11.29	13	1,446	8.99	26	1,511	17.21	37	3,081	12.01	7	364	19.23	28	2,126	13.17
IUGR	8	557	14.36	0	50	0	0	40	0	1	96	10.42	0	13	0	0	35	0
APH	4	121	33.06	0	7	0	0	2	0	1	14	71.43	0	1	0	0	10	0
Oligo hydramnious	0	240	0	0	21	0	0	21	0	0	47	0	0	7	0	0	19	0
2015																		
Complications	Malay			Chinese			Indian			Indigenous			Others			Foreigner		
	SB	Live Birth	SB Rate	SB	Live Birth	SB Rate	SB	Live Birth	SB Rate	SB	Live Birth	SB Rate	SB	Live Birth	SB Rate	SB	Live Birth	SB Rate
	n	n		n	n		n	n		n	n		n	n		n	n	
SGA	209	19,469	10.74	10	1,576	6.35	27	1,561	17.3	44	3,168	13.89	4	194	20.62	22	1,631	13.49
IUGR	5	663	7.54	0	58	0	0	58	0	2	106	18.87	0	7	0	1	37	27.03
APH	23	189	121.69	0	13	0	0	3	0	8	18	444.44	0	1	0	3	10	300
Oligo hydramnious	1	263	3.8	0	18	0	0	25	0	1	51	19.61	0	1	0	0	18	0

In all 3 years, complications resulting in stillbirth was the highest due to APH among the Malay and Indigenous mothers. In Indian mothers the cause of stillbirth was highest due to IUGR in 2013 and SGA in 2014 and 2015.

In 2014 and 2015 more than 50% of mothers with stillbirth had a past obstetric history of MSB. In all 3 years 43-49% of mothers with stillbirth had a previous history of stillbirth.

Table 1.22: Distribution of stillbirth by past obstetrics history 2013 - 2015

Past obstetrics history	2013				
	Total Deliveries	FSB	MSB	Livebirth	SB Rate
	n	n	n	n	
Stillbirth	612	6	23	583	49.74
• FSB	231	6	6	219	54.79
• MSB	388	0	17	371	45.82
Miscarriage	8,071	18	58	7,995	9.51

Past obstetrics history	2014				
	Total Deliveries	FSB	MSB	Livebirth	SB Rate
	n	n	n	n	
Stillbirth	554	4	21	529	47.26
• FSB	199	1	4	194	25.77
• MSB	360	3	18	339	61.95
Miscarriage	12,563	18	71	12,474	7.13

Past obstetrics history	2015				
	Total Deliveries	FSB	MSB	Livebirth	SB Rate
	n	n	n	n	
Stillbirth	573	6	18	549	43.72
• FSB	229	4	2	223	26.91
• MSB	347	2	16	329	54.71
Miscarriage	13,567	39	62	13,466	7.50

KEY FINDINGS

Stillbirth by hospital

HKL had the highest stillbirth rates between 2013- 2015. The lowest rates were seen from HTJ N. Sembilan in 2013, HRPZ 11 Kelantan in 2014 and in 2015 HUS, Sarawak.

RISK OF STILLBIRTH BY MATERNAL DERMOGRAPHIC CHARACTERS

Ethnicity

Indian mothers had the highest stillbirth rate. Among the indigenous population the Melanau's had the highest stillbirth rates in 2013 and 2015 while Bajau's in 2014. Stillbirth rates were high among foreigners.

Maternal Age

The stillbirth rates were high in women with extreme ages, 14 years and below and in women aged 40 and above. Foreigners and indigenous mothers aged more than 45 years had a high stillbirth rate.

Parity

Stillbirth rates were high in higher order pregnancies in mothers Para 6 and more. Indian mothers Para 6 and more had a high stillbirth rate in 2014 and 2015 while the stillbirth rates were high among foreigners who were Para 6 and more in all the 3 years.

Color coding

The highest stillbirth rates were seen in women coded red at booking. The foreigners fared the worst in this group followed by indigenous and Chinese mothers.

Maternal BMI

Both Low and high maternal BMI is a risk for stillbirth.

Maternal co morbidities

Preexisting DM, GDM, preexisting hypertension, preeclampsia, eclampsia, Anaemia at booking and delivery, Thalassemia, Renal disease, Asthma and heart disease increases the risk of stillbirth.

Maternal social habits

Alcohol, drugs and smoking in pregnancy increases the risk of stillbirth.

Maternal STI

HIV and Syphilis increases the risk for stillbirth.

Maternal Past history of stillbirth

Stillbirth risk increases with previous history of stillbirth.

RISK OF STILLBIRTH BY BABY CHARACTERS

Baby weight

Stillbirth rates are higher in babies weighing less than 2000g. The babies with extremely low birth weight of less than 1000g have the highest risk of stillbirth.

Baby gender

Stillbirth rates in Male and female babies were similar. Babies with ambiguous genitalia had a higher stillbirth rate.

Type of pregnancy

Multiple births have a higher risk of stillbirths compared to singleton pregnancies.

Complication

Stillbirth rates were higher in preterm than in term and post term babies. Indian mothers have a higher stillbirth rate with postterm babies. APH increases the risk of stillbirth. Stillbirth rate due to SGA was similar to IUGR. Congenital anomalies increase risk of stillbirth.

Conclusion

Still birth rate in Malaysian tertiary hospitals was 6.53 per 1000 livebirths between 2013 and 2015. Further reduction in stillbirth rate is possible. The preventable causes include maternal age, maternal parity, social habits and pre-existing maternal disease.

Preconception care is important and should be an integral part of management of women in the reproductive age group. The goal is to ensure that women are healthy before they embark on pregnancy.

The issues that need attention are

- i) Avoid unplanned pregnancies at an advanced age
- ii) Review of pre-existing maternal disease such as Diabetes, Hypertension, Renal, Heart disease, Asthma and Thalassemia. Control of these chronic illness is important for a good pregnancy outcome.
- iii) Family planning advice for women with poor control of medical disease.
- iv) Good blood sugar control before conception and throughout pregnancy will reduce risk of miscarriage, congenital anomalies and stillbirth.
- v) Correction of anaemia and advice on compliance to medication during pregnancy
- vi) Review of medication usage that needs to be avoided in pregnancy where possible. Alternative medication and the risk of teratogenicity to be informed clearly.
- vii) Advice on cessation and avoidance of smoking, alcohol and drugs.
- viii) Screening and treatment of STI
- ix) Folic acid supplementation to prevent neural tube defects.

The high stillbirth rates in HKL may be due to it being the main tertiary referral hospital for Malaysia with availability of fetal maternal services. Foreigners had a poorer outcome and this may be due to inadequate and expensive antenatal care. Among the 3-main ethnic groups, Indian mothers had a poorer outcome in spite of receiving antenatal care. It is important to promote Adolescent health by education and empowerment.

It is a tragedy when women lose their baby. The burden of a stillbirth not only affects her but also her family. She experiences various psychological symptoms which may persist long after the death of her baby. Stillbirth rate should be used as a marker of quality of care in pregnancy and childbirth.

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TYPE OF DELIVERY

Table 2.1:Distribution of Delivery by SDP 2013-2015

SDP	2013		2014		2015	
	n	%	n	%	n	%
HSA Johor	7,897	6.5	11,001	7.8	14,600	9.7
HSB, Kedah	10,239	8.4	9,362	6.6	9,704	6.4
HRPZ II, Kelantan	12,017	9.8	12,396	8.8	11,908	7.9
Malacca Hospital	10,630	8.7	11,019	7.8	11,733	7.8
HTJ, N. Sembilan	4,859	4.0	8,343	5.9	9,240	6.1
HTAA, Pahang	7,959	6.5	7,982	5.6	10,091	6.7
HRPB, Perak	4,107	3.4	6,488	4.6	7,607	5.0
HTF, Perlis	3,898	3.2	4,184	3.0	4,479	3.0
HPP,Pulau Pinang	3,721	3.0	4,574	3.2	3,712	2.5
HWKK, Likas, Sabah	15,392	12.6	15,702	11.1	15,441	10.2
HUS, Sarawak	4,530	3.7	11,745	8.3	10,739	7.1
HTAR, Klang,Selangor	12,144	9.9	12,863	9.1	13,036	8.6
HSNZ, Terengganu	13,746	11.3	14,572	10.3	15,693	10.4
HKL	10,957	9.0	11,426	8.1	9,956	6.6
Hospital Segamat	-	-	-	-	3,329	2.2
Total	122,096	100.0	141,657	100.0	151,268	100.0

Table 2.2:Distribution of Delivery type 2013-2015

Delivery	Types	2013		2014		2015	
		n	%	n	%	n	%
Vaginal	SVD	82,750	67.77	96,197	67.91	101,486	67.09
	Breech	421	0.34	520	0.37	480	0.32
	NA	14	0.01	39	0.03	19	0.01
Total		83,185	68.13	96,756	68.30	101,985	67.42
Instrumental	Vacuum	4,009	3.28	5,171	3.65	5,654	3.74
	Forceps	395	0.32	503	0.36	429	0.28
Total		4,399	3.60	5,665	4.00	6,075	4.02
CS	LSCS	30,391	24.89	35,385	24.98	39,250	25.95
	Classical	138	0.11	193	0.14	102	0.07
	Hysterotomy	30	0.02	24	0.02	21	0.01
	Hysterectomy	48	0.04	61	0.04	64	0.04
	Others	7	0.01	11	0.01	574	0.38
Total		30,571	25.04	35,649	25.17	39,419	26.06
NA		3,941	3.23	3,587	2.53	3,789	2.50

Table 2.3:Delivery Type by Age 2013 – 2015

2013										
Age	Vaginal		Instrumental		CS		NA		Total delivery	
	n	%	n	%	n	%	n	%	n	%
10-14	91	0.11	3	0.07	16	0.05	2	0.05	112	0.09
15-19	4515	5.46	274	6.25	770	2.58	204	5.23	5763	4.77
20-24	16176	19.57	1020	23.28	4128	13.83	698	17.89	22022	18.23
25-29	29591	35.81	1741	39.74	10085	33.79	1418	36.35	42835	35.47
30-34	20237	24.49	932	21.27	8,627	28.90	923	23.66	30719	25.44
35-39	9425	11.40	332	7.58	4778	16.01	494	12.66	15029	12.44
40-44	2422	2.93	71	1.62	1,344	4.50	151	3.87	3988	3.30
45-49	170	0.21	7	0.16	95	0.32	9	0.23	281	0.23
50-54	13	0.02	1	0.02	3	0.01	1	0.03	18	0.01
55-59	1	0.00	0	0.00	2	0.01	0	0.00	3	0.00
2014										
Age	Vaginal		Instrumental		CS		NA		Total delivery	
	n	%	n	%	n	%	n	%	n	%
10-14	103	0.11	8	0.14	18	0.05	1	0.03	130	0.09
15-19	5251	5.46	395	7.01	908	2.61	155	4.37	6709	4.79
20-24	18453	19.19	1283	22.76	4560	13.09	688	19.39	24984	17.83
25-29	33852	35.21	2241	39.76	11579	33.25	1220	34.39	48892	34.88
30-34	24574	25.56	1,177	20.88	10,457	30.02	860	24.24	37068	26.45
35-39	10956	11.39	411	7.29	5611	16.11	442	12.46	17420	12.43
40-44	2756	2.87	116	2.06	1,579	4.53	163	4.59	4614	3.29
45-49	191	0.20	5	0.09	111	0.32	17	0.48	324	0.23
50-54	13	0.01	0	0.00	6	0.02	1	0.03	20	0.01
55-59	0	0.00	0	0.00	0	0.00	1	0.03	1	0.00
2015										
Age	Vaginal		Instrumental		CS		NA		Total delivery	
	n	%	n	%	n	%	n	%	n	%
10-14	106	0.11	2	0.04	21	0.06	2	0.06	131	0.1
15-19	5049	5.25	409	7.26	964	2.77	141	3.97	6563	4.7
20-24	19262	20.03	1329	23.58	5267	15.12	680	19.17	26538	18.9
25-29	35419	36.84	2526	44.82	12587	36.14	1312	36.98	51844	37.0
30-34	26658	27.73	1,243	22.05	11,474	32.94	953	26.86	40328	28.8
35-39	11807	12.28	429	7.61	6265	17.99	486	13.70	18987	13.5
40-44	2891	3.01	105	1.86	1,844	5.29	163	4.59	5003	3.6
45-49	187	0.19	7	0.12	127	0.36	11	0.31	332	0.2
50-54	11	0.01	0	0.00	2	0.01	3	0.08	16	0.01
55-59	3	0.00	0	0.00	1	0.00	0	0.00	4	0.00

Table 2.4a:Delivery type by SDP 2013

SDP	2013															
	Vaginal						Instrumental				CS		NA		Total Delivery	
	SVD		Breech		NA		Vacuum		Forceps							
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
HSA, Johor	4,860	61.53	49	0.62	2	0.03	595	7.53	47	0.60	2137	27.05	209	2.65	7,899	6.47
HSB, Kedah	6,962	67.99	46	0.45	2	0.02	504	4.92	10	0.10	2479	24.21	236	2.30	10,239	8.39
HRPZ II, Kelantan	7,723	64.27	27	0.22	0	0.00	109	0.91	30	0.25	1918	15.96	2,210	18.39	12,017	9.84
Malacca Hospital	7,359	69.22	20	0.19	1	0.01	269	2.53	5	0.05	2765	26.01	212	1.99	10,631	8.71
HTJ N Sembilan	3,369	69.34	21	0.43	2	0.04	200	4.12	7	0.14	1224	25.19	36	0.74	4,859	3.98
HTAA, Pahang	5,588	70.20	12	0.15	2	0.03	294	3.69	20	0.25	1840	23.12	204	2.56	7,960	6.52
HRPB,Perak	1,336	32.53	0	0.00	0	0.00	6	0.15	3	0.07	2694	65.60	68	1.66	4,107	3.36
HTF, Perlis	2,888	74.09	9	0.23	0	0.00	117	3.00	9	0.23	852	21.86	23	0.59	3,898	3.19
HPP, Pulau Pinang	2,099	56.41	4	0.11	0	0.00	65	1.75	20	0.54	1455	39.10	78	2.10	3,721	3.05
HWKK, Likas, Sabah	11,862	77.07	43	0.28	3	0.02	402	2.61	10	0.06	2713	17.63	359	2.33	15,392	12.61
HUS,Sarawak	3,124	68.96	16	0.35	0	0.00	212	4.68	17	0.38	1079	23.82	82	1.81	4,530	3.71
HTAR, Selangor	7,797	64.20	72	0.59	0	0.00	670	5.52	178	1.47	3326	27.39	102	0.84	12,145	9.95
HSNZ, Terengganu	11,093	80.70	56	0.41	1	0.01	208	1.51	26	0.19	2355	17.13	7	0.05	13,746	11.26
HKL	6,690	61.06	46	0.42	1	0.01	358	3.27	13	0.12	3734	34.08	115	1.05	10,957	8.97
Total	82,750	67.77	421	0.34	14	0.01	4,009	3.28	395	0.32	30571	25.04	3,941	3.23	122,101	100.00

Table 2.4b:Delivery type by SDP 2014

SDP	2014															
	Vaginal						Instrumental				CS		NA		Total Delivery	
	SVD		Breech		NA		Vacuum		Forceps							
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
HSA, Johor	7,092	64.47	69	0.63	9	0.08	714	6.49	79	0.72	2921	26.55	117	1.06	11,001	7.77
HSB, Kedah	6,363	67.94	48	0.51	1	0.01	505	5.39	35	0.37	2270	24.24	143	1.53	9,365	6.61
HRPZ II, Kelantan	7,931	63.98	32	0.26	0	0.00	224	1.81	19	0.15	2160	17.42	2,030	16.38	12,396	8.75
Malacca Hospital	7,837	71.12	22	0.20	5	0.05	153	1.39	3	0.03	2916	26.46	83	0.75	11,019	7.78
HTJ,N Sembilan	5,876	70.43	20	0.24	1	0.01	300	3.60	7	0.08	2033	24.37	106	1.27	8,343	5.89
HTAA, Pahang	5,769	72.28	14	0.18	2	0.03	260	3.26	23	0.29	1784	22.35	130	1.63	7,982	5.63
HRPB, Perak	3,363	51.83	9	0.14	6	0.09	33	0.51	15	0.23	2894	44.61	168	2.59	6,488	4.58
HTF, Perlis	3,030	72.37	16	0.38	0	0.00	119	2.84	11	0.26	999	23.86	12	0.29	4,187	2.96
HPP, Pulau Pinang	2,926	63.97	5	0.11	0	0.00	95	2.08	27	0.59	1450	31.70	71	1.55	4,574	3.23
HWKK, Likas,Sabah	11,142	70.95	66	0.42	2	0.01	587	3.74	11	0.07	3634	23.14	261	1.66	15,703	11.08
HUS,Sarawak	8,015	68.24	34	0.29	12	0.10	613	5.22	75	0.64	2870	24.43	127	1.08	11,746	8.29
HTAR, Selangor	8,446	65.66	66	0.51	0	0.00	747	5.81	137	1.06	3356	26.09	112	0.87	12,864	9.08
HSNZ, Terengganu	11,243	77.15	72	0.49	0	0.00	382	2.62	13	0.09	2739	18.80	123	0.84	14,572	10.29
HKL	7,164	62.70	47	0.41	1	0.01	439	3.84	48	0.42	3623	31.71	104	0.91	11,426	8.07
Total	96,197	67.90	520	0.37	39	0.03	5,171	3.65	503	0.36	35649	25.16	3,587	2.53	141,666	100.00

Table 2.4c:Delivery type by SDP 2015

SDP	2015															
	Vaginal						Instrumental				CS		NA		Total Delivery	
	SVD		Breech		NA		Vacuum		Forceps							
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
HSA, Johor	9,410	64.45	63	0.43	3	0.02	1,129	7.73	21	0.14	3,896	26.68	78	0.53	14,600	9.65
HSB, Kedah	6,898	71.08	35	0.36	0	0.00	469	4.83	47	0.48	2,086	21.50	169	1.74	9,704	6.41
HRPZ II, Kelantan	7,241	60.81	33	0.28	1	0.01	96	0.81	42	0.35	2,022	16.98	2473	20.77	11,908	7.87
Malacca hospital	8,183	69.74	12	0.10	2	0.02	146	1.24	3	0.03	3,314	28.25	73	0.62	11,733	7.76
HTJ, N Sembilan	6,258	67.73	14	0.15	2	0.02	404	4.37	12	0.13	2,425	26.24	125	1.35	9,240	6.11
HTAA, Pahang	7,194	71.29	8	0.08	0	0.00	440	4.36	40	0.40	2,328	23.07	81	0.80	10,091	6.67
HRPB, Perak	4,321	56.80	9	0.12	7	0.09	30	0.39	4	0.05	3,107	40.84	129	1.70	7,607	5.03
HTF, Perlis	3,137	70.04	11	0.25	0	0.00	115	2.57	13	0.29	1,162	25.94	41	0.92	4,479	2.96
HPP, Pulau Pinang	2,382	64.17	13	0.35	1	0.03	151	4.07	18	0.48	1,110	29.90	37	1.00	3,712	2.45
HWKK, Likas, Sabah	10,235	66.28	60	0.39	2	0.01	605	3.92	11	0.07	4,489	29.07	40	0.26	15,442	10.21
HUS, Sarawak	7,632	71.06	22	0.20	0	0.00	344	3.20	60	0.56	2,603	24.24	79	0.74	10,740	7.10
HTAR, Selangor	8,280	63.51	78	0.60	1	0.01	854	6.55	67	0.51	3,665	28.11	93	0.71	13,038	8.62
HSNZ, Terengganu	11,626	74.07	62	0.40	0	0.00	408	2.60	25	0.16	3,434	21.88	140	0.89	15,695	10.38
HKL	6,134	61.60	49	0.49	0	0.00	370	3.72	39	0.39	3,141	31.55	224	2.25	9,957	6.58
Hospital Segamat	2,555	76.73	11	0.33	0	0.00	93	2.79	27	0.81	637	19.13	7	0.21	3,330	2.20
Total	101,486	67.09	480	0.32	19	0.01	5,654	3.74	429	0.28	39,419	26.06	3789	2.50	151,276	100.00

Table 2.5a:Deliveries in relation to risk level at booking 2013 and 2014

Risk Level at Booking	2013															
	Vaginal						Instrumental				CS		NA		Total Delivery	
	SVD		Breech		NA		Vacuum		Forceps							
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Red	1,595	1.94	13	3.60	0	0.00	110	2.75	7	1.78	1175	39.35	86	2.20	2,986	2.47
Yellow	13,827	16.81	55	15.24	3	23.08	686	17.18	69	17.56	7163	32.05	546	14.00	22,349	18.50
Green	47,263	57.45	189	52.35	8	61.54	2,173	54.42	220	55.98	16499	23.94	2,556	65.52	68,908	57.05
White II	4,360	5.30	11	3.05	0	0.00	107	2.68	8	2.04	514	9.88	200	5.13	5,200	4.31
White I	10,775	13.10	32	8.86	1	7.69	650	16.28	63	16.03	2780	18.97	350	8.97	14,651	12.13
No Code	2,819	3.43	32	8.86	0	0.00	149	3.73	14	3.56	1037	24.88	117	3.00	4,168	3.45
NA	1,628	1.98	29	8.03	1	7.69	118	2.96	12	3.05	680	27.05	46	1.18	2,514	2.08
2014																
Red	1,550	1.62	21	4.55	1	2.86	99	1.92	10	2.01	1160	39.94	63	1.78	2,904	2.07
Yellow	13,219	13.82	56	12.12	4	11.43	706	13.72	67	13.48	6697	31.78	323	9.10	21,072	15.03
Green	63,546	66.43	279	60.39	25	71.43	3,432	66.68	331	66.60	21921	23.73	2,845	80.19	92,379	65.90
White II	2,993	3.13	6	1.30	0	0.00	94	1.83	10	2.01	456	12.56	72	2.03	3,631	2.59
White I	8,381	8.76	35	7.58	1	2.86	515	10.01	51	10.26	2190	19.39	119	3.35	11,292	8.06
No Code	3,090	3.23	31	6.71	1	2.86	140	2.72	15	3.02	966	22.44	62	1.75	4,305	3.07
NA	2,873	3.00	34	7.36	3	8.57	161	3.13	13	2.62	1439	31.37	64	1.80	4,587	3.27

Table 2.5b:Deliveries in relation to risk level at booking 2015

Risk Level at Booking	2015																
	Vaginal						Instrumental				CS			NA		Total Delivery	
	SVD		Breech		NA		Vacuum		Forceps								
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	
Red	1,356	1.34	11	2.74	2	10.53	101	1.79	7	1.64	1065	41.46	27	0.72	2,569	1.72	
Yellow	10,847	10.74	44	10.97	2	10.53	670	11.90	57	13.38	5917	33.43	161	4.29	17,698	11.82	
Green	76,167	75.43	254	63.34	10	52.63	4,197	74.52	317	74.41	27409	24.56	3,257	86.83	111,611	74.53	
White II	1,883	1.86	6	1.50	0	0.00	51	0.91	5	1.17	212	9.70	29	0.77	2,186	1.46	
White I	4,580	4.54	12	2.99	0	0.00	235	4.17	15	3.52	975	16.62	51	1.36	5,868	3.92	
No Code	2,732	2.71	29	7.23	1	5.26	159	2.82	9	2.11	884	22.95	38	1.01	3,852	2.57	
NA	3,408	3.38	45	11.22	4	21.05	219	3.89	16	3.76	2090	35.01	188	5.01	5,970	3.99	

Table 2.6a:Distribution of Deliveries by Ethnicity 2013

Ethnicity	2013																
	Vaginal						Instrumental				CS			NA		Total Delivery	
	SVD		Breech		NA		Vacuum		Forceps								
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	
Malay	57,838	68.44	238	0.28	9	0.01	2,587	3.06	265	0.31	20406	24.15	3,164	3.74	84,507	69.97	
Chinese	3,553	60.95	17	0.29	1	0.02	278	4.77	33	0.57	1837	31.51	110	1.89	5,829	4.83	
Indian	2,834	53.50	25	0.47	0	0.00	242	4.57	34	0.64	2092	39.49	70	1.32	5,297	4.39	
Kadazan/Dusun	3,190	75.01	6	0.14	2	0.05	96	2.26	6	0.14	852	20.03	101	2.37	4,253	3.52	
Murut	228	76.00	1	0.33	0	0.00	8	2.67	0	0.00	54	18.00	9	3.00	300	0.25	
Bajau	2,659	80.85	7	0.21	0	0.00	82	2.49	2	0.06	472	14.35	67	2.04	3,289	2.72	
Melanau	29	82.86	1	2.86	0	0.00	1	2.86	1	2.86	3	8.57	0	0.00	35	0.03	
Iban	779	73.08	5	0.47	0	0.00	34	3.19	1	0.09	228	21.39	19	1.78	1,066	0.88	
Bidayuh	513	66.36	1	0.13	0	0.00	41	5.30	0	0.00	204	26.39	14	1.81	773	0.64	
OA Peninsular Malaysia	405	58.95	0	0.00	0	0.00	17	2.47	4	0.58	251	36.54	10	1.46	687	0.57	
OI Sabah & Sarawak	1,640	72.92	10	0.44	0	0.00	58	2.58	3	0.13	485	21.57	53	2.36	2,249	1.86	
Foreigners	6,849	67.87	45	0.45	1	0.01	469	4.65	40	0.40	2460	24.38	227	2.25	10,091	8.36	
Others	1,363	73.72	5	0.27	0	0.00	62	3.35	2	0.11	376	20.34	41	2.22	1,849	1.53	
NA	387	70.24	0	0.00	0	0.00	18	3.27	2	0.36	128	23.23	16	2.90	551	0.46	

Table 2.6b: Distribution of Deliveries by Ethnicity 2014

Ethnicity	2014															
	Vaginal						Instrumental				CS		NA		Total Delivery	
	SVD		Breech		NA		Vacuum		Forceps							
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Malay	67,549	69.09	327	0.33	21	0.02	3,248	3.32	324	0.33	23363	23.90	2,938	3.01	97,770	69.75
Chinese	5,207	65.58	15	0.19	5	0.06	357	4.50	45	0.57	2218	27.93	93	1.17	7,940	5.66
Indian	3,347	56.81	17	0.29	1	0.02	233	3.95	31	0.53	2198	37.30	65	1.10	5,892	4.20
Kadazan/Dusun	2,810	66.48	13	0.31	0	0.00	158	3.74	5	0.12	1182	27.96	59	1.40	4,227	3.02
Murut	197	67.93	0	0.00	0	0.00	11	3.79	0	0.00	79	27.24	3	1.03	290	0.21
Bajau	2,393	74.95	10	0.31	0	0.00	113	3.54	6	0.19	626	19.61	45	1.41	3,193	2.28
Melanau	37	72.55	0	0.00	0	0.00	3	5.88	2	3.92	9	17.65	0	0.00	51	0.04
Iban	1,524	69.02	8	0.36	3	0.14	110	4.98	7	0.32	536	24.28	20	0.91	2,208	1.58
Bidayuh	1,124	64.97	5	0.29	1	0.06	99	5.72	7	0.40	470	27.17	24	1.39	1,730	1.23
OA Peninsular Malaysia	518	63.79	4	0.49	0	0.00	20	2.46	4	0.49	254	31.28	12	1.48	812	0.58
OI Sabah & Sarawak	1,492	72.29	6	0.29	0	0.00	71	3.44	3	0.15	463	22.43	29	1.41	2,064	1.47
Foreigners	7,713	68.20	47	0.42	1	0.01	600	5.31	56	0.50	2685	23.74	207	1.83	11,309	8.07
Others	1,313	64.46	5	0.25	2	0.10	85	4.17	3	0.15	600	29.46	29	1.42	2,037	1.45
NA	428	66.15	5	0.77	1	0.15	39	6.03	4	0.62	146	22.57	24	3.71	647	0.46

Table 2.6c: Distribution of Deliveries by Ethnicity 2015

Ethnicity	2015															
	Vaginal						Instrumental				CS		NA		Total Delivery	
	SVD		Breech		NA		Vacuum		Forceps							
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Malay	73,184	68.51	264	0.25	13	0.01	3,737	3.50	311	0.29	25987	24.33	3,326	3.11	106,822	71.33
Chinese	5,733	65.25	22	0.25	0	0.00	426	4.85	26	0.30	2497	28.42	82	0.93	8,786	5.87
Indian	3,491	56.00	21	0.34	1	0.02	277	4.44	15	0.24	2347	37.65	82	1.32	6,234	4.16
Kadazan/Dusun	2,892	63.35	11	0.24	0	0.00	164	3.59	3	0.07	1482	32.46	13	0.28	4,565	3.05
Murut	213	63.96	2	0.60	0	0.00	17	5.11	0	0.00	101	30.33	0	0.00	333	0.22
Bajau	2,393	69.14	2	0.06	1	0.03	131	3.79	3	0.09	920	26.58	11	0.32	3,461	2.31
Melanau	47	70.15	1	1.49	0	0.00	2	2.99	0	0.00	16	23.88	1	1.49	67	0.04
Iban	1,440	70.97	4	0.20	0	0.00	78	3.84	6	0.30	480	23.66	21	1.03	2,029	1.35
Bidayuh	1,087	67.56	0	0.00	0	0.00	50	3.11	10	0.62	451	28.03	11	0.68	1,609	1.07
OA Peninsular Malaysia	756	67.26	1	0.09	0	0.00	32	2.85	6	0.53	316	28.11	13	1.16	1,124	0.75
OI Sabah & Sarawak	2,284	66.34	12	0.35	0	0.00	121	3.51	4	0.12	1012	29.39	10	0.29	3,443	2.30
Foreigners	5,954	65.77	50	0.55	1	0.01	493	5.45	39	0.43	2372	26.20	144	1.59	9,053	6.05
Others	770	66.32	3	0.26	1	0.09	48	4.13	0	0.00	319	27.48	20	1.72	1,161	0.78
NA	729	68.32	8	0.75	2	0.19	56	5.25	3	0.28	252	23.62	17	1.59	1,067	0.71

Table 2.7: Distribution of Deliveries by Parity 2013 – 2015

Parity	2013															
	Vaginal						Instrumental				CS		NA		Total Delivery	
	SVD		Breech		NA		Vacuum		Forceps							
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
1	26,123	62.09	92	0.22	7	0.02	2,620	6.23	300	0.71	11528	27.40	1,404	3.34	42,074	34.22
2 - 5	51,131	71.23	247	0.34	6	0.01	1,258	1.75	83	0.12	16828	23.44	2,227	3.10	71,780	58.38
≥ 6	4,878	72.35	21	0.31	0	0.00	105	1.56	10	0.15	1465	21.73	263	3.90	6,742	5.48
NA	135	75.00	1	0.56	0	0.00	10	5.56	0	0.00	27	15.00	7	3.89	180	0.15
Parity	2014															
	Vaginal						Instrumental				CS		NA		Total Delivery	
	SVD		Breech		NA		Vacuum		Forceps							
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
1	29,990	61.85	136	0.28	11	0.02	3,437	7.09	360	0.74	13256	27.34	1,298	2.68	48,488	34.59
2 - 5	60,016	71.49	284	0.34	20	0.02	1,605	1.91	126	0.15	19876	23.67	2,027	2.41	83,954	59.89
≥ 6	5,197	72.55	40	0.56	2	0.03	86	1.20	10	0.14	1619	22.60	209	2.92	7,163	5.11
NA	449	79.47	2	0.35	2	0.35	19	3.36	1	0.18	78	13.81	14	2.48	565	0.40
Parity	2015															
	Vaginal						Instrumental				CS		NA		Total Delivery	
	SVD		Breech		NA		Vacuum		Forceps							
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
1	31,430	60.37	124	0.24	6	0.01	3,809	7.32	310	0.60	15013	28.83	1,374	2.64	52,066	34.77
2 - 5	64,346	71.11	250	0.28	12	0.01	1,753	1.94	112	0.12	21846	24.14	2,164	2.39	90,483	60.42
≥ 6	4,468	71.58	24	0.38	1	0.02	50	0.80	1	0.02	1501	24.05	197	3.16	6,242	4.17
NA	729	75.70	3	0.31	0	0.00	20	2.08	3	0.31	192	19.94	16	1.66	963	0.64

Table 2.8a: Deliveries in relation to Medical Problems 2013

Medical Problems	2013															
	Vaginal						Instrumental					CS		NA		Total Delivery
	SVD		Breech		NA		Vacuum		Forceps		n	n	n			
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Diabetes	6,257	7.61	28	7.76	1	7.69	357	8.94	32	8.14	3748	12.56	211	5.41	10,634	8.81
Pre-existing	400	0.49	2	0.55	0	0.00	18	0.45	3	0.76	350	1.17	21	0.54	794	0.66
Gestational	5,840	7.10	26	7.20	1	7.69	338	8.46	29	7.38	3384	11.34	189	4.84	9,807	8.12
NA	17	0.02	0	0.00	0	0.00	1	0.03	0	0.00	14	0.05	1	0.03	33	0.03
Hypertension	2,057	2.50	25	6.93	0	0.00	140	3.51	14	3.56	2137	7.16	104	2.67	4,477	3.71
Pre-existing	391	0.48	3	0.83	0	0.00	27	0.68	3	0.76	443	1.48	23	0.59	890	0.74
Gestational	1,518	1.85	16	4.43	0	0.00	106	2.65	10	2.54	1534	5.14	70	1.79	3,254	2.69
Pre-eclampsia	188	0.23	4	1.11	0	0.00	22	0.55	1	0.25	495	1.66	19	0.49	729	0.60
Eclampsia	7	0.01	0	0.00	0	0.00	2	0.05	0	0.00	35	0.12	2	0.05	46	0.04
Heart Disease	368	0.45	3	0.83	0	0.00	59	1.48	4	1.02	218	0.73	14	0.36	666	0.55
NYHA I	200	0.24	1	0.28	0	0.00	27	0.68	1	0.25	97	0.32	10	0.26	336	0.28
NYHA II	32	0.04	1	0.28	0	0.00	8	0.20	1	0.25	21	0.07	2	0.05	65	0.05
NYHA III	3	0.00	0	0.00	0	0.00	0	0.00	0	0.00	5	0.02	0	0.00	8	0.01
NYHA IV	1	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2	0.01	0	0.00	3	0.00
NA	132	0.16	1	0.28	0	0.00	24	0.60	2	0.51	93	0.31	2	0.05	254	0.21
Others	3,413	4.15	16	4.43	0	0.00	182	4.56	20	5.09	1502	5.03	44	1.13	5,177	4.29
TB	39	0.05	2	0.55	0	0.00	1	0.03	0	0.00	23	0.08	0	0.00	65	0.05
Blood Disorder	743	0.90	4	1.11	0	0.00	44	1.10	5	1.27	250	0.84	8	0.21	1,054	0.87
Thalassemia	364	0.44	2	0.55	0	0.00	20	0.50	2	0.51	137	0.46	6	0.15	531	0.44
Collagen Disease	1	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	0.00
Asthma	1,218	1.48	2	0.55	0	0.00	63	1.58	7	1.78	542	1.82	22	0.56	1,854	1.54
Renal Disease	21	0.03	0	0.00	0	0.00	0	0.00	0	0.00	18	0.06	0	0.00	39	0.03
None	71,209	86.56	300	83.10	12	92.31	3,348	83.85	332	84.48	23351	78.23	3,560	91.26	102,112	84.55

Table 2.8b: Deliveries in relation to Medical Problems 2014

Medical Problems	2014															
	Vaginal						Instrumental				CS		NA		Total Delivery	
	SVD		Breech		NA		Vacuum		Forceps							
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Diabetes	7,250	7.58	40	8.66	5	14.29	373	7.25	45	9.05	4572	13.13	216	6.09	12,501	8.92
Pre-existing	166	0.17	0	0.00	0	0.00	9	0.17	0	0.00	300	0.86	20	0.56	495	0.35
Gestational	7,062	7.38	40	8.66	5	14.29	360	6.99	45	9.05	4244	12.19	194	5.47	11,950	8.53
NA	22	0.02	0	0.00	0	0.00	4	0.08	0	0.00	28	0.08	2	0.06	56	0.04
Hypertension	1,976	2.07	26	5.63	2	5.71	126	2.45	12	2.41	2167	6.22	95	2.68	4,404	3.14
Pre-existing	339	0.35	2	0.43	1	2.86	27	0.52	0	0.00	381	1.09	22	0.62	772	0.55
Gestational	1,456	1.52	18	3.90	0	0.00	92	1.79	12	2.41	1517	4.36	63	1.78	3,158	2.25
Pre-eclampsia	200	0.21	3	0.65	0	0.00	15	0.29	1	0.20	424	1.22	17	0.48	660	0.47
Eclampsia	11	0.01	0	0.00	0	0.00	0	0.00	0	0.00	43	0.12	0	0.00	54	0.04
Heart Disease	350	0.37	4	0.87	0	0.00	36	0.70	5	1.01	229	0.66	10	0.28	634	0.45
NYHA I	190	0.20	1	0.22	0	0.00	11	0.21	1	0.20	106	0.30	4	0.11	313	0.22
NYHA II	20	0.02	0	0.00	0	0.00	7	0.14	1	0.20	10	0.03	0	0.00	38	0.03
NYHA III	2	0.00	0	0.00	0	0.00	0	0.00	0	0.00	6	0.02	0	0.00	8	0.01
NYHA IV	0	0.00	1	0.22	0	0.00	0	0.00	0	0.00	1	0.00	0	0.00	2	0.00
NA	138	0.14	2	0.43	0	0.00	18	0.35	3	0.60	106	0.30	6	0.17	273	0.19
Others	4,107	4.29	18	3.90	0	0.00	217	4.22	26	5.23	1773	5.09	63	1.78	6,204	4.43
TB	52	0.05	0	0.00	0	0.00	2	0.04	0	0.00	22	0.06	0	0.00	76	0.05
Blood Disorder	1,202	1.26	4	0.87	0	0.00	81	1.57	7	1.41	498	1.43	12	0.34	1,804	1.29
Thalassemia	384	0.40	0	0.00	0	0.00	17	0.33	3	0.60	163	0.47	6	0.17	573	0.41
Collagen Disease	1	0.00	0	0.00	0	0.00	0	0.00	0	0.00	3	0.01	1	0.03	5	0.00
Asthma	1,503	1.57	4	0.87	0	0.00	75	1.46	11	2.21	599	1.72	25	0.70	2,217	1.58
Renal Disease	22	0.02	0	0.00	0	0.00	1	0.02	0	0.00	18	0.05	1	0.03	42	0.03
None	83,118	86.90	386	83.55	28	80.00	4,452	86.50	417	83.90	27300	78.38	3,208	90.42	118,909	84.84

Table 2.9b:Apgar score in relation to Delivery 2015

Apgar score	2015															
	Vaginal						Instrumental				CS		NA		Total Delivery	
	SVD		Breech		NA		Vacuum		Forceps							
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Apgar 1 min																
≤ 7	1,503	1.48	89	18.54	0	0.00	665	11.76	58	13.52	2031	5.15	16	0.45	4,362	2.88
> 7	99,005	97.56	249	51.88	17	89.47	4,962	87.76	368	85.78	37084	94.08	212	5.91	141,897	93.80
NA	978	0.96	142	29.58	2	10.53	27	0.48	3	0.70	304	0.77	3,561	99.28	5,017	3.32
Apgar 5 min																
≤ 7	448	0.44	33	6.88	0	0.00	115	2.03	6	1.40	377	0.96	5	0.14	984	0.65
> 7	99,927	98.46	288	60.00	17	89.47	5,449	96.37	414	96.50	38548	97.79	223	6.22	144,866	95.76
NA	1,111	1.09	159	33.13	2	10.53	90	1.59	9	2.10	494	1.25	3,561	99.28	5,426	3.59

Table 2.10a:Complications in relation to Mode of delivery 2013

Complications	2013													
	Vaginal						Instrumental				CS		Total Delivery	
	SVD		Breech		NA		Vacuum		Forceps					
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Prematurity	7,792	9.42	248	58.91	2	14.29	191	4.76	38	9.62	5324	17.42	13,595	11.13
Fetal Distress	0	0.00	0	0.00	0	0.00	3,276	81.72	298	75.44	9764	31.94	13,338	10.92
Retained Placenta	106	0.13	0	0.00	0	0.00	3	0.07	0	0.00	15	0.05	124	0.10
PPH	403	0.49	2	0.48	0	0.00	47	1.17	3	0.76	394	1.29	849	0.70
< 1500 mls	338	0.41	1	0.24	0	0.00	43	1.07	3	0.76	274	0.90	659	0.54
NA	21	0.03	0	0.00	0	0.00	0	0.00	0	0.00	3	0.01	24	0.02
Cord Prolapse	9	0.01	0	0.00	0	0.00	1	0.02	0	0.00	185	0.61	195	0.16
IUGR	346	0.42	2	0.48	0	0.00	13	0.32	2	0.51	642	2.10	1,005	0.82
PPROM	1,544	1.87	11	2.61	1	7.14	126	3.14	12	3.04	543	1.78	2,237	1.83
Amniotic Fluid Embolism	5	0.00	0	0.00	0	0.00	0	0.00	0	0.00	52	0.17	57	0.05
DVT	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	3	0.01	3	0.00
Uterine Inversion	4	0.00	0	0.00	0	0.00	0	0.00	0	0.00	8	0.03	12	0.01
Uterine Rupture	1	0.00	0	0.00	0	0.00	0	0.00	0	0.00	3	0.01	4	0.00
Uterine Atony	220	0.27	2	0.48	0	0.00	31	0.77	2	0.51	357	1.17	612	0.50
Thromboembolism	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Others	586	0.71	15	3.56	0	0.00	131	3.27	15	3.80	2262	7.40	3,009	2.46

Table 2.10b:Complications in relation to Mode of delivery 2014

Complications	2014													
	Vaginal						Instrumental				CS		Total Delivery	
	SVD		Breech		NA		Vacuum		Forceps					
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Prematurity	8,989	9.34	304	58.46	9	23.08	265	5.12	53	10.54	5978	16.77	15,598	11.01
Fetal Distress	0	0.00	0	0.00	0	0.00	4,218	81.57	357	70.97	11556	32.42	16,131	11.39
Retained Placenta	43	0.04	1	0.19	0	0.00	1	0.02	0	0.00	8	0.02	53	0.04
PPH	301	0.31	4	0.77	0	0.00	45	0.87	9	1.79	324	0.91	683	0.48
< 1500 mls	259	0.27	4	0.77	0	0.00	37	0.72	8	1.59	213	0.60	521	0.37
NA	10	0.01	0	0.00	0	0.00	1	0.02	0	0.00	1	0.00	12	0.01
Cord Prolapse	18	0.02	2	0.38	0	0.00	1	0.02	1	0.20	198	0.56	220	0.16
IUGR	317	0.33	7	1.35	0	0.00	5	0.10	4	0.80	674	1.89	1,007	0.71
PPROM	137	0.14	8	1.54	0	0.00	7	0.14	1	0.20	96	0.27	249	0.18
Amniotic Fluid Embolism	1	0.00	0	0.00	0	0.00	0	0.00	0	0.00	7	0.02	8	0.01
DVT	2	0.00	0	0.00	0	0.00	0	0.00	0	0.00	3	0.01	5	0.00
Uterine Inversion	4	0.00	0	0.00	0	0.00	0	0.00	0	0.00	4	0.01	8	0.01
Uterine Rupture	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2	0.01	2	0.00
Uterine Atony	204	0.21	3	0.58	0	0.00	31	0.60	5	0.99	306	0.86	549	0.39
Thromboembolism	1	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	0.00
Others	1,491	1.55	31	5.96	1	2.56	167	3.23	13	2.58	2071	5.81	3,774	2.66

Table 2.10c:Complications in relation to Mode of delivery 2015

Complications	2015													
	Vaginal						Instrumental				CS		Total Delivery	
	SVD		Breech		NA		Vacuum		Forceps					
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Prematurity	10,548	10.96	293	56.35	2	5.13	319	6.17	53	10.54	7138	20.02	18,353	12.96
Fetal Distress	0	0.00	0	0.00	0	0.00	4,980	96.31	311	61.83	13516	37.91	18,807	13.28
Retained Placenta	30	0.03	1	0.19	0	0.00	0	0.00	0	0.00	8	0.02	39	0.03
PPH	534	0.56	10	1.92	0	0.00	71	1.37	12	2.39	351	0.98	978	0.69
< 1500 mls	499	0.52	8	1.54	0	0.00	62	1.20	12	2.39	257	0.72	838	0.59
NA	10	0.01	0	0.00	0	0.00	2	0.04	0	0.00	3	0.01	15	0.01
Cord Prolapse	7	0.01	0	0.00	0	0.00	3	0.05	1	0.23	38	0.10	49	0.03
IUGR	268	0.26	5	1.04	0	0.00	14	0.25	2	0.47	652	1.65	941	0.62
PPROM	167	0.16	3	0.63	0	0.00	3	0.05	3	0.70	53	0.13	229	0.15
Amniotic Fluid Embolism	1	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	0.00	2	0.00
DVT	1	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2	0.01	3	0.00
Uterine Inversion	1	0.00	0	0.00	0	0.00	0	0.00	0	0.00	4	0.01	5	0.00
Uterine Rupture	1	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2	0.01	3	0.00
Uterine Atony	451	0.44	8	1.67	0	0.00	56	0.99	5	1.17	328	0.83	848	0.56
Thromboembolism	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Others	1,273	1.25	22	4.58	0	0.00	130	2.30	13	3.03	998	2.53	2,436	1.61

CAESAREAN SECTION

Table 3.1a: CS Rate by SDP 2013

SDP	2013					LSCS	
	Total Patients	Total CS					
		Elective	Emergency	NA			
	n	n	n	n	%		
HSA, Johor	7,799	391	1698	0	26.79		
HSB, Kedah	10,129	719	1,701	0	23.89		
HRPZ II, Kelantan	11,913	325	1,545	1	15.71		
Malacca Hospital	10,533	723	1,979	0	25.65		
HTJ,N.Sembilan	4,809	336	866	0	24.99		
HTAA, Pahang	7,884	433	1,364	1	22.81		
HRPB, Perak	4,028	763	1855	1	65.02		
HTF, Perlis	3,868	200	641	0	21.74		
HPP,Pulau Pinang	3,672	416	1,001	2	38.64		
HWKK Likas, Sabah	15,220	527	2,123	0	17.41		
HUS, Sarawak	4,481	247	815	0	23.70		
HTAR Selangor	11,986	776	2,454	0	26.95		
HSNZ Terengganu	13,620	565	1,743	0	16.95		
HKL	10,829	666	2,971	0	33.59		
Hospital Segamat	-	-	-	-	-		
Total	120,771	7,087	22,756	5	24.71		

Table 3.1b: CS Rate by SDP 2014

SDP	2014					LSCS	
	Total Patients	Total CS					
		Elective	Emergency	NA			
	n	n	n	n	%		
HSA, Johor	10,872	535	2322	1	26.29		
HSB, Kedah	9,273	652	1,568	2	23.96		
HRPZ II, Kelantan	12,298	403	1718	0	17.25		
Malacca Hospital	10,929	762	2,090	0	26.10		
HTJ,N.Sembilan	8,264	562	1,430	3	24.14		
HTAA, Pahang	7,897	420	1,321	1	22.06		
HRPB, Perak	6,385	825	1,982	0	43.96		
HTF, Perlis	4,160	198	787	1	23.70		
HPP,Pulau Pinang	4,527	377	1,037	0	31.23		
HWKK Likas, Sabah	15,500	695	2,844	3	22.85		
HUS, Sarawak	11,639	668	2,150	0	24.21		
HTAR Selangor	12,718	777	2,502	0	25.78		
HSNZ Terengganu	14,418	605	2063	0	18.50		
HKL	11,282	712	2,813	0	31.24		
Hospital Segamat	-	-	-	-	-		
Total	140,162	8,191	26,627	11	24.85		

Table 3.1a: CS Rate by SDP 2015

SDP	2015				
	Total Patients	Total CS			LSCS
		Elective	Emergency	NA	
	n	n	n	n	%
HSA, Johor	14,443	630	3166	0	26.28
HSB, Kedah	9,603	583	1,458	0	21.25
HRPZ II, Kelantan	11,808	375	1604	0	16.76
Malacca Hospital	11,623	1025	2,210	0	27.83
HTJ,N.Sembilan	9,162	621	1,761	0	26.00
HTAA, Pahang	9,994	572	1,707	0	22.80
HRPB, Perak	7,519	909	2,128	0	40.39
HTF, Perlis	4,436	229	910	0	25.68
HPP,Pulau Pinang	3,673	199	890	0	29.65
HWKK Likas, Sabah	15,239	667	3,713	0	28.74
HUS, Sarawak	10,656	603	1,957	0	24.02
HTAR Selangor	12,889	874	2,707	0	27.78
HSNZ Terengganu	15,546	600	2766	0	21.65
HKL	9,848	603	2,462	0	31.12
Hospital Segamat	3,307	89	534	0	18.84
Total	149,746	8,579	29,973	0	25.74

Figure 2.1 : Percentage of LSCS by Hospitals

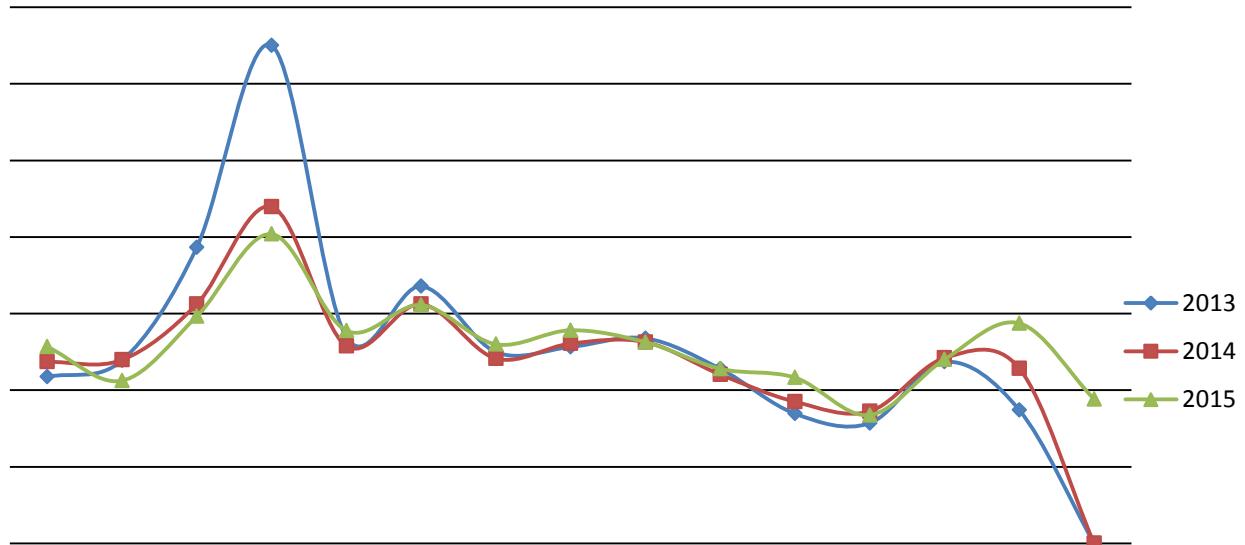


Table 3.2a: CS Rate by Ethnicity from 2013 – 2015

Ethnicity	2013					
	Total Patients	Total CS			LSCS	
		Elective	Emergency	NA		
	n	n	n	n	%	
Malay	84,503	4,912	15,489	5	24.14	
Chinese	5,829	610	1,227	0	31.51	
Indian	5,296	500	1,592	0	39.50	
Kadazan/Dusun	4,253	186	666	0	20.03	
Murut	300	14	40	0	18.00	
Bajau	3,289	111	361	0	14.35	
Melanau	35	0	3	0	8.57	
Iban	1,066	51	177	0	21.39	
Bidayuh	773	59	145	0	26.39	
OA Peninsular Malaysia	687	46	205	0	36.54	
OI Sabah & Sarawak	2,249	95	390	0	21.57	
Foreigners	10,091	392	2,068	0	24.38	
Others	1,849	86	290	0	20.34	
NA	551	25	103	0	13.98	

Table 3.2b: CS Rate by Ethnicity from 2014 – 2015

Ethnicity	2014					2015				
	Total Patients	Total CS			LSCS	Total CS				LSCS
		Elective	Emergency	NA		Total Patients	Elective	Emergency	NA	
		n	n	n	%	n	n	n	n	%
Malay	97,764	5,577	17,782	4	23.89	106,818	5,925	20,062	0	24.33
Chinese	7,939	726	1,492	0	27.94	8,786	800	1,697	0	28.42
Indian	5,892	515	1,680	3	37.25	6,234	553	1,794	0	37.65
Kadazan/Dusun	4,227	258	923	1	27.94	4,565	254	1,228	0	32.46
Murut	290	24	55	0	27.24	333	11	90	0	30.33
Bajau	3,192	120	506	0	19.61	3,460	121	799	0	26.59
Melanau	51	1	8	0	17.65	67	9	7	0	23.88
Iban	2,208	117	419	0	24.28	2,029	94	386	0	23.66
Bidayuh	1,730	108	362	0	27.17	1,608	104	347	0	28.05
OA Peninsular Malaysia	812	57	197	0	31.28	1,124	67	249	0	28.11
OI Sabah & Sarawak	2,064	101	362	0	22.43	3,443	184	828	0	29.39
Foreigners	11,309	448	2,235	2	23.72	9,051	358	2,014	0	26.21
Others	2,037	114	485	1	29.41	1,161	58	261	0	27.48
NA	647	25	121	0	19.96	1,067	41	211	0	19.96

Table 3.3a: Rate by age & parity from 2013 – 2015

Age	2013					LSCS	
	Total Patients	Total CS					
		Elective	Emergency	NA			
	n	n	n	n	%		
10-14	112	2	14	0	14.29		
15-19	5,763	69	701	0	13.36		
20-24	22,022	528	3,600	0	18.74		
25-29	42,835	1,952	8,131	2	23.54		
30-34	30,719	2,540	6,085	2	28.08		
35-39	15,029	1,547	3,231	0	31.79		
40-44	3,988	423	920	1	33.70		
45-49	281	24	71	0	33.81		
50-54	18	2	1	0	16.67		
55-59	4	0	2	0	50.00		
Parity							
1	42,071	1,365	10,162	1	27.40		
2-5	71,778	5,333	11,492	3	23.44		
≥ 6	6,742	381	1,083	1	21.73		
NA	180	8	19	0	15.00		

Table 3.3b: Rate by age & parity from 2014 – 2015

Age	2014				2015				LSCS	
	Total Patients	Total CS			LSCS	Total Patients	Total CS			
		Elective	Emergency	NA			Elective	Emergency		
	n	n	n	n	%	n	n	n	%	
10-14	130	4	14	0	13.85	131	2	19	0	16.03
15-19	6,709	78	830	0	13.53	6,563	84	880	0	14.69
20-24	24,984	520	4,038	2	18.25	26,538	645	4,622	0	19.85
25-29	48,892	2,216	9,361	2	23.68	51,844	2,163	10,424	0	24.28
30-34	37,068	3,044	7,408	5	28.21	40,328	3,115	8,359	0	28.45
35-39	17,420	1,827	3,783	1	32.21	18,987	2,014	4,251	0	33.00
40-44	4,614	474	1,104	1	34.22	5,003	527	1,317	0	36.86
45-49	324	27	84	0	34.26	332	29	98	0	38.25
50-54	20	1	5	0	30.00	16	0	2	0	12.50
55-59	1	0	0	0	0.00	4	0	1	0	25.00
Parity					Parity					
1	48,484	1,477	11,776	3	27.34	52,060	1,616	13,397	0	28.84
2-5	83,950	6,296	13,572	8	23.68	90,481	6,585	15,261	0	24.14
≥ 6	7,163	402	1,217	0	22.60	6,242	334	1,167	0	24.05
NA	565	16	62	0	13.81	963	44	148	0	19.94

Table 3.4: CS Rate by risk level of booking from 2013 – 2015

Risk level at Booking	Caesarean										Total	
	LSCS		Classical		Hysterotomy		Hysterectomy		Others			
2013	n	%	n	%	n	%	n	%	n	%	n	%
Red	1171	3.95	3	2.19	1	3.33	8	17.02	0	0.00	1,183	3.67
Yellow	7118	23.99	35	25.55	9	30.00	15	31.91	1	14.29	7,178	22.26
Green	16401	55.28	78	56.93	15	50.00	18	38.30	3	42.86	16,515	51.21
White II	512	1.73	2	1.46	0	0.00	0	0.00	0	0.00	514	1.59
White I	2770	9.34	7	5.11	1	3.33	2	4.26	2	28.57	2,782	8.63
No Code	1028	3.46	5	3.65	4	13.33	1	2.13	0	0.00	1,038	3.22
NA	670	2.26	7	5.11	0	0.00	3	6.38	1	14.29	3,041	9.43
Caesarean										Total		
2014	LSCS		Classical		Hysterotomy		Hysterectomy		Others			
	n	%	n	%	n	%	n	%	n	%	n	%
Red	1,149	3.32	8	4.23	1	4.17	5	8.47	2	22.22	1,165	3.39
Yellow	6,656	19.25	28	14.81	6	25.00	12	20.34	2	22.22	6,704	19.48
Green	21,749	62.91	132	69.84	13	54.17	33	55.93	5	55.56	21,932	63.74
White II	453	1.31	2	1.06	0	0.00	1	1.69	0	0.00	456	1.33
White I	2,178	6.30	7	3.70	1	4.17	0	0.00	0	0.00	2,186	6.35
No Code	956	2.77	8	4.23	0	0.00	6	10.17	0	0.00	970	2.82
NA	1,430	4.14	4	2.12	3	12.50	2	3.39	0	0.00	993	2.89
Caesarean										Total		
2015	LSCS		Classical		Hysterotomy		Hysterectomy		Others			
	n	%	n	%	n	%	n	%	n	%	n	%
Red	1,057	2.75	4	3.96	2	9.52	5	8.06	0	0.00	1,068	2.77
Yellow	5,889	15.34	12	11.88	6	28.57	11	17.74	4	33.33	5,922	15.35
Green	27,289	71.09	82	81.19	9	42.86	34	54.84	8	66.67	27,422	71.07
White II	211	0.55	0	0.00	0	0.00	0	0.00	0	0.00	211	0.55
White I	973	2.53	1	0.99	0	0.00	3	4.84	0	0.00	977	2.53
No Code	882	2.30	1	0.99	1	4.76	6	9.68	0	0.00	890	2.31
NA	2,085	5.43	1	0.99	3	14.29	3	4.84	0	0.00	2,092	5.42

Table 3.5: Distribution of medical problems and CS rate from 2013 – 2015

Medical Problems	2013					2014					2015				
	Total Patients	Total CS			LSCS	Total Patients	Total CS			LSCS	Total Patients	Total CS			LSCS
		Elective	Emergency	NA			Elective	Emergency	NA			Elective	Emergency	NA	
	n	n	n	n	%	n	n	n	n	%	n	n	n	n	%
Diabetes	10,629	1,026	2,719	1	35.2	12,500	1,184	3,388	0	36.6	11,543	1,045	3,092	0	35.8
Pre-existing	790	98	250	0	44.1	494	86	214	0	60.7	358	57	144	0	56.1
Gestational	9,807	922	2,461	1	34.5	11,950	1,086	3,158	0	35.5	11,111	970	2,933	0	35.1
NA	32	6	8	0	43.8	56	12	16	0	50.0	74	18	15	0	44.6
Hypertension	4,477	343	1,794	0	47.7	4,404	344	1,822	1	49.2	4,023	285	1,681	0	48.9
Pre-existing	885	108	332	0	49.7	772	85	296	0	49.4	744	82	306	0	52.2
Gestational	3,151	182	1,249	0	45.4	3,159	217	1,299	1	48.0	2,762	150	1,138	0	46.6
Pre-eclampsia	726	20	473	0	67.9	660	27	397	0	64.2	606	26	347	0	61.6
Eclampsia	46	0	35	0	76.1	54	1	42	0	79.6	53	1	43	0	83.0
Heart Disease	77	45	30	0	97.4	634	76	153	0	36.1	533	68	108	0	33.0
NYHA I	23	14	7	0	91.3	313	31	75	0	33.9	260	25	42	0	25.8
NYHA II	13	9	4	0	100.0	38	5	5	0	26.3	35	5	10	0	42.9
NYHA III	3	2	1	0	100.0	8	3	3	0	75.0	5	0	0	0	0.0
NYHA IV	1	0	1	0	100.0	2	0	1	0	50.0	0	0	0	0	0.0
NA	37	20	17	0	100.0	273	37	69	0	38.8	233	38	56	0	40.3
Others	5,177	373	1,129	0	29.0	6,204	404	1,369	0	28.6	5,026	309	972	0	25.5
TB	65	2	21	0	35.4	76	7	15	0	28.9	68	3	12	0	22.1
Blood Disorder	1,054	66	184	0	23.7	1,804	110	388	0	27.6	1,486	65	264	0	22.1
Collagen Disease	5	1	3	0	80.0	5	1	2	0	60.0	3	0	2	0	66.7
Asthma	1,854	132	410	0	29.2	2,217	132	467	0	27.0	1,939	132	389	0	26.9
Renal Disease	39	6	12	0	46.2	42	5	13	0	42.9	66	4	21	0	37.9
None	102,107	5,485	17,862	4	22.9	118,901	6,438	20,852	10	23.0	130,616	7,070	24,849	0	24.4

Table 3.6a: CS in relation to Accoucher 2013

Accoucher	2013											
	Caesarean										Total	
	LSCS		Classical		Hysterotomy		Hysterectomy		Others			
	n	%	n	%	n	%	n	%	n	%	n	%
Specialist	2,043	6.89	23	16.79	20	66.67	31	65.96	0	0.00	2,117	7.08
MO>6 months O&G experience	26,648	89.81	105	76.64	10	33.33	16	34.04	6	85.71	26,785	89.61
MO<6 months O&G experience	772	2.60	5	3.65	0	0.00	0	0.00	0	0.00	777	2.60
MO no O&G experience	43	0.14	0	0.00	0	0.00	0	0.00	1	14.29	44	0.15
Other MO	29	0.10	2	1.46	0	0.00	0	0.00	0	0.00	31	0.10
HO	73	0.25	2	1.46	0	0.00	0	0.00	0	0.00	75	0.25

Table 3.6b: CS in relation to Accoucher 2014

Accoucher	2014											
	Caesarean										Total	
	LSCS		Classical		Hysterotomy		Hysterectomy		Others			
	n	%	n	%	n	%	n	%	n	%	n	%
Specialist	2,215	6.41	38	20.11	10	41.67	27	45.76		0.00	2,290	6.57
MO>6 months O&G experience	31,581	91.35	148	78.31	14	58.33	30	50.85	1	11.11	31,774	91.17
MO<6 months O&G experience	674	1.95	3	1.59	0	0.00	1	1.69	7	77.78	685	1.97
MO no O&G experience	32	0.09	0	0.00	0	0.00	1	1.69	1	11.11	34	0.10
Other MO	67	0.19	0	0.00	0	0.00	0	0.00	0	0.00	67	0.19
HO	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00

Table 3.6c: CS in relation to Accoucher 2015

Accoucher	2015											
	Caesarean										Total	
	LSCS		Classical		Hysterotomy		Hysterectomy		Others			
	n	%	n	%	n	%	n	%	n	%	n	%
Specialist/Consultant	2,236	5.83	28	27.72	11	52.38	42	67.74	0	0.00	2,317	6.01
MO>6 months O&G experience	29,783	77.59	49	48.51	8	38.10	18	29.03	9	75.00	29,867	77.41
MO<6 months O&G experience	579	1.51	1	0.99	0	0.00	0	0.00	0	0.00	580	1.50
MO no O&G experience	5,788	15.08	23	22.77	2	9.52	2	3.23	3	25.00	5,818	15.08
Other MO	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Other HO	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00

Table 3.7: Apgar Score in relation to CS 2013 – 2015

Apgar score	2013											
	LSCS		Classical		Hysterotomy		Hysterectomy		Others		Total	
Apgar at 1 min	n	%	n	%	n	%	n	%	n	%	n	%
≤ 7	2,913	9.59	20	14.49	15	50.00	23	47.92	0	0.00	2,971	9.70
> 7	27,281	89.77	114	82.61	9	30.00	22	45.83	7	100.00	27,433	89.61
NA	197	0.65	4	2.90	6	20.00	3	6.25	0	0.00	210	0.69
Apgar at 5 min												
≤ 7	464	1.53	5	3.62	6	20.00	6	12.50	0	0.00	481	1.57
> 7	29,546	97.22	128	92.75	15	50.00	35	72.92	7	100.00	29,731	97.12
NA	381	1.25	5	3.62	9	30.00	7	14.58	0	0.00	402	1.31
	2014											
Apgar at 1 min												
≤ 7	3,253	9.19	25	12.95	11	45.83	24	39.34	2	18.18	3,315	9.29
> 7	31,876	90.08	165	85.49	7	29.17	32	52.46	9	81.82	32,089	89.95
NA	256	0.72	3	1.55	6	25.00	5	8.20	0	0.00	270	0.76
Apgar at 5 min												
≤ 7	683	1.93	6	3.11	4	16.67	4	6.56	0	0.00	697	1.95
> 7	34,216	96.70	182	94.30	12	50.00	48	78.69	11	100.00	34,469	96.62
NA	486	1.37	5	2.59	8	33.33	9	14.75	0	0.00	508	1.42
	2015											
Apgar at 1 min												
≤ 7	2,012	5.13	13	12.75	4	19.05	22	34.38	0	0.00	2,051	5.20
> 7	36,946	94.13	86	84.31	10	47.62	37	57.81	12	100.00	37,091	94.02
NA	292	0.74	3	2.94	7	33.33	5	7.81	0	0.00	307	0.78
Apgar at 5 min												
≤ 7	372	0.95	3	2.94	2	9.52	4	6.25	0	0.00	381	0.97
> 7	38,398	97.83	96	94.12	11	52.38	55	85.94	12	100.00	38,572	97.78
NA	480	1.22	3	2.94	8	38.10	5	7.81	0	0.00	496	1.26

Table 3.8: Indications for caesarean 2013 – 2015

Complications of Delivery	2013						2014						2015					
	Total Patients	Total CS			LSCS	Total Patients	Total CS			LSCS	Total Patients	Total CS			LSCS			
		Elective	Emergency	NA			Elective	Emergency	NA			Elective	Emergency	NA				
	n	n	n	n	%	n	n	n	%	n	n	n	n	n	n	%		
Fetal Distress	13,336	108	9,654	2	73.22	16,168	204	11,389	4	71.73	18,807	188	13,328	0	71.87			
Secondary Aresst	513	4	509	0	100.00	589	2	587	0	100.00	538	5	533	0	100.00			
Prolonged 2 nd Stage	472	3	469	0	100.00	461	2	459	0	100.00	416	2	414	0	100.00			
CPD	52	22	30	0	100.00	59	13	46	0	100.00	48	15	33	0	100.00			
Poor Progress	1,996	13	1,983	0	100.00	2,324	17	2,307	0	100.00	2,844	32	2,812	0	100.00			
Abruption Placenta	215	2	213	0	100.00	301	8	256	0	87.71	303	4	253	0	84.82			
PP Major and Minor	1,380	610	765	1	99.71	1,438	662	775	1	100.00	1,536	658	878	0	100.00			
Maternal Request	1,078	621	457	0	100.00	971	583	388	0	100.00	1,956	1,119	837	0	100.00			
Failed Induction	1,712	46	1,666	0	100.00	2,000	45	1,955	0	100.00	2,041	40	2,001	0	100.00			
Cord Prolapse /Presentation	196	5	180	0	94.39	223	4	194	0	88.79	229	1	214	0	93.89			
Failed Instrumentation	95	1	94	0	100.00	118	0	118	0	100.00	87	0	87	0	100.00			
Severe PIH	444	52	392	0	100.00	459	33	424	2	100.00	282	33	249	0	100.00			
Impending Eclampsia	468	15	452	0	99.79	405	26	379	0	100.00	757	30	727	0	100.00			
Eclampsia	289	11	253	0	91.35	310	16	267	0	91.29	216	10	187	0	91.20			
Macrosomia	1,337	410	927	0	100.00	1,611	431	1,241	1	103.85	1,658	529	1,129	0	100.00			
Retroviral Disease	57	22	35	0	100.00	44	25	19	0	100.00	43	23	20	0	100.00			
Chorioamnionitis	179	4	175	0	100.00	229	6	223	0	100.00	191	3	188	0	100.00			
Refused Trial of Scar	477	260	217	0	100.00	715	413	302	0	100.00	624	315	309	0	100.00			
Fetal Anomaly	81	30	37	0	82.72	91	26	44	0	76.92	66	26	25	0	77.27			
Polyhydramnious	36	18	18	0	100.00	31	9	22	0	100.00	30	13	17	0	100.00			
Oligohydramnious	300	72	228	0	100.00	359	90	269	0	100.00	379	114	265	0	100.00			
Preterm Labour	2,883	90	1,218	1	45.40	3,554	94	1,453	0	43.53	3,138	257	1,311	0	49.97			
Heart Disease	78	45	31	0	97.44	640	77	155	0	36.25	539	70	111	0	33.58			
Others	2,733	876	1,856	1	100.00	3,416	1,043	2,371	2	100.00	3,378	1,034	2,344	0	100.00			

PRIMARY POSTPARTUM HAEMORRHAGE

Figure 1.10: Funnel plot percentage of primary postpartum haemorrhage, 2013

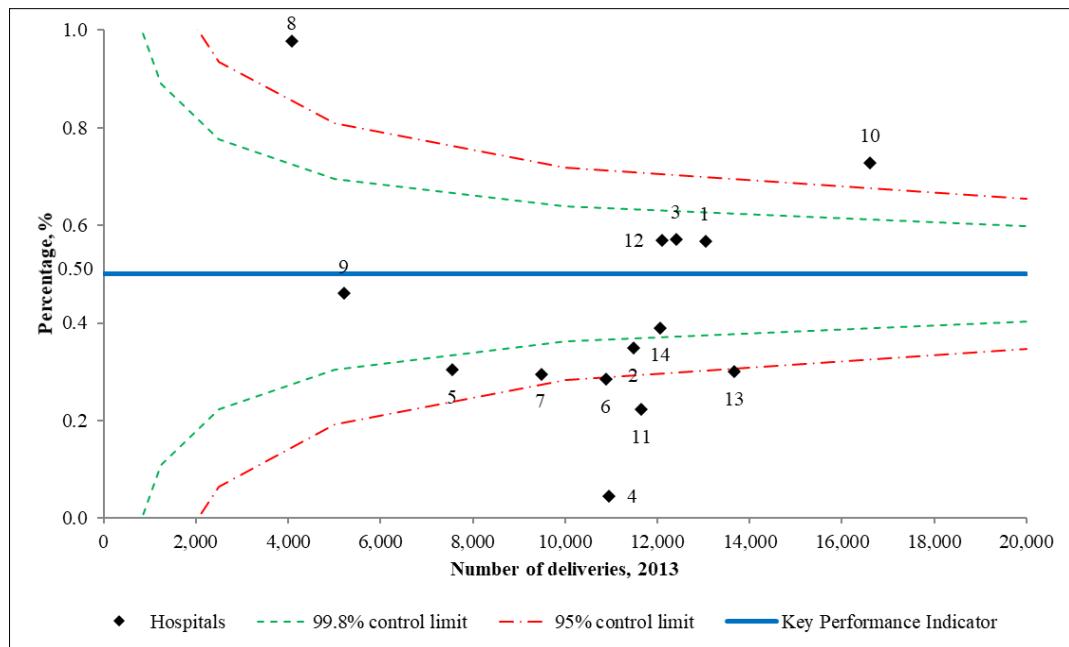


Table 4.1a: Distribution of primary postpartum haemorrhage by centre, 2013

No.	SDP	Total Delivery		≥ 1500 mls	
		n	n	%	
1	HSA	13,041	74	0.57	
2	HSB	11,479	40	0.35	
3	HRPZ II	12,414	71	0.57	
4	Malacca Hospital	10,961	5	0.05	
5	HTJ	7,564	23	0.30	
6	HTAA	10,900	31	0.28	
7	HRPB	9,482	28	0.30	
8	HTF	4,091	40	0.98	
9	HPP	5,214	24	0.46	
10	HWKK,Likas	16,602	121	0.73	
11	HUS	11,655	26	0.22	
12	HTAR	12,107	69	0.57	
13	HSNZ	13,670	41	0.30	
14	HKL	12,058	47	0.39	
TOTAL		151,238	640	0.42	

Figure 1.10: Funnel plot percentage of primary postpartum haemorrhage, 2014

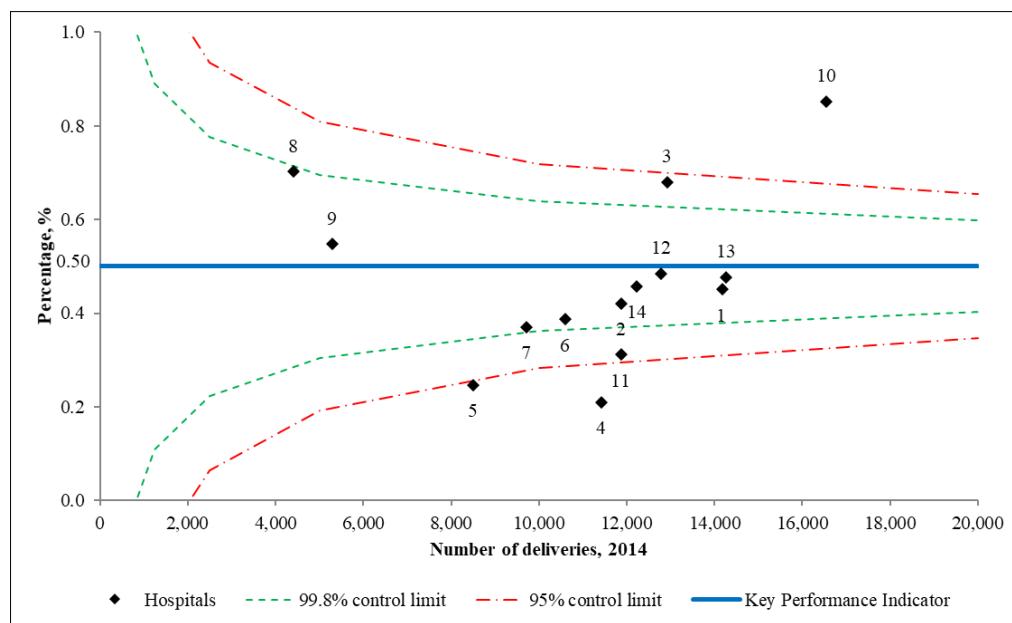


Table 4.1b: Distribution of primary postpartum haemorrhage by centre, 2014

No.	SDP	Total Delivery		≥ 1500 mls	
		n	n	%	
1	HSA	14,172	64	0.45	
2	HSB	11,884	50	0.42	
3	HRPZ II	12,933	88	0.68	
4	Malacca Hospital	11,420	24	0.21	
5	HTJ	8,513	21	0.25	
6	HTAA	10,605	41	0.39	
7	HRPB	9,711	36	0.37	
8	HTF	4,415	31	0.70	
9	HPP	5,294	29	0.55	
10	HWKK,Likas	16,540	141	0.85	
11	HUS	11,868	37	0.31	
12	HTAR	12,786	62	0.48	
13	HSNZ	14,270	68	0.48	
14	HKL	12,231	56	0.46	
TOTAL		156,642	748	0.48	

Figure 1.11: Funnel plot percentage of primary postpartum haemorrhage, 2015

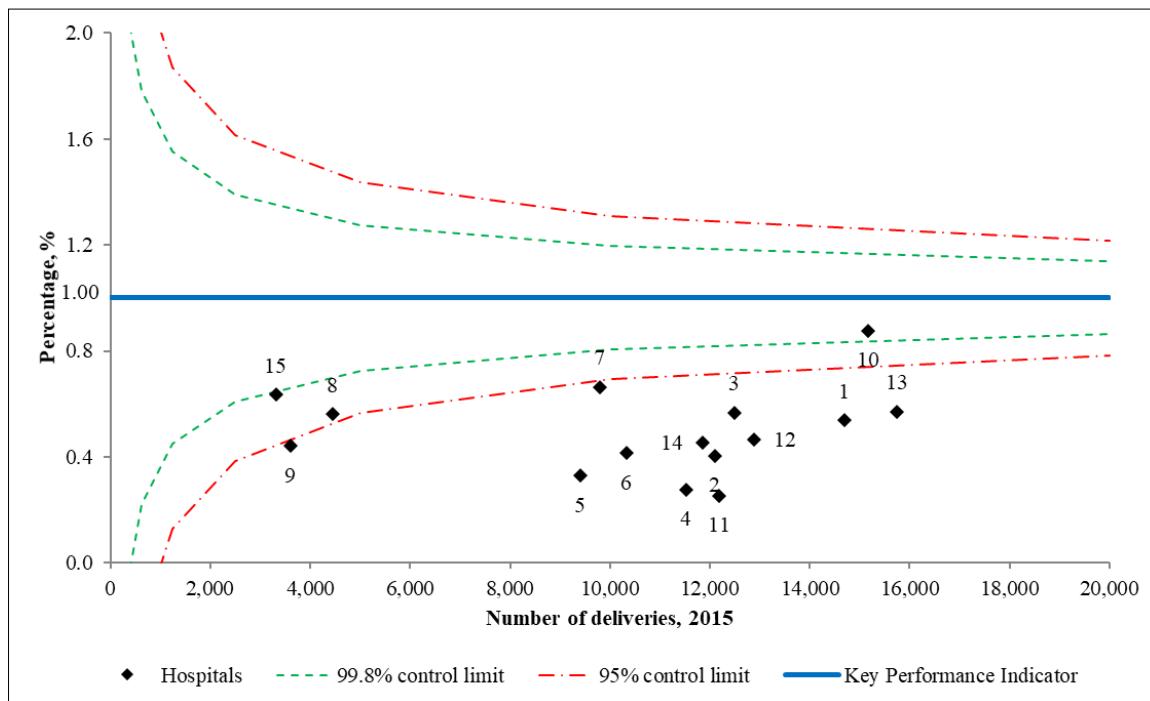


Table 4.1c: Distribution of primary postpartum haemorrhage by centre, 2015

No.	SDP	Total Delivery		≥ 1500 mls	
		n	n	%	
1	HSA	14,690	79	0.54	
2	HSB	12,098	49	0.41	
3	HRPZII	12,504	71	0.57	
4	Malacca Hospital	11,528	32	0.28	
5	HTJ	9,417	31	0.33	
6	HTAA	10,344	43	0.42	
7	HRPB	9,809	65	0.66	
8	HTF	4,455	25	0.56	
9	HPP	3,618	16	0.44	
10	HWKK,Likas	15,165	133	0.88	
11	HUS	12,191	31	0.25	
12	HTAR	12,888	60	0.47	
13	HSNZ	15,751	90	0.57	
14	HKL	11,866	54	0.46	
15	Hospital Segamat	3,311	21	0.63	
TOTAL		159,635	800	0.50	

DIABETES MELLITUS IN PREGNANCY

Table 5.1a: Incidence of Diabetes in pregnancy by SDP 2013

SDP	2013								
	Total Patients		Pre-existing Diabetes		Gestational Diabetes		NA		
	n	n	%	n	%	n	%	n	%
HSA, Johor	7,799	54	0.69	1026	13.16	0	0.00	1080	13.85
HSB, Kedah	10,129	71	0.70	700	6.91	5	0.05	776	7.66
HRPZ II, Kelantan	11,913	78	0.65	699	5.87	1	0.01	778	6.53
Malacca Hospital	10,533	79	0.75	788	7.48	0	0.00	867	8.23
HTJ, N Sembilan	4,809	63	1.31	590	12.27	1	0.02	654	13.60
HTAA Pahang	7,884	20	0.25	807	10.24	1	0.01	828	10.50
HRPB, Perak	4,028	38	0.94	405	10.05	8	0.20	451	11.20
HTF, Perlis	3,868	31	0.80	332	8.58	1	0.03	364	9.41
HPP, Pulau Pinang	3,672	10	0.27	181	4.93	2	0.05	193	5.26
HWKK Likas, Sabah	15,220	24	0.16	529	3.48	0	0.00	553	3.63
HUS Sarawak	4,481	128	2.86	382	8.52	0	0.00	510	11.38
HTAR, Selangor	11,986	105	0.88	1197	9.99	1	0.01	1303	10.87
HSNZ, Terengganu	13,620	32	0.23	1418	10.41	11	0.08	1461	10.73
HKL	10,829	61	0.56	754	6.96	1	0.01	816	7.54
Total	120,771	794	0.66	9808	8.12	32	0.03	10634	8.81

Table 5.1b: Incidence of Diabetes in pregnancy by SDP 2014

SDP	2014								
	Total Patients		Pre-existing Diabetes		Gestational Diabetes		NA		
	n	n	%	n	%	n	%	n	%
HSA, Johor	10,872	27	0.25	1326	12.20	0	0.00	1353	12.44
HSB, Kedah	9,273	46	0.50	688	7.42	7	0.08	741	7.99
HRPZ II, Kelantan	12,298	60	0.49	628	5.11	1	0.01	689	5.60
Malacca Hospital	10,929	34	0.31	632	5.78	1	0.01	667	6.10
HTJ, N Sembilan	8,264	66	0.80	658	7.96	2	0.02	726	8.79
HTAA, Pahang	7,897	8	0.10	795	10.07	5	0.06	808	10.23
HRPB, Perak	6,385	55	0.86	593	9.29	18	0.28	666	10.43
HTF, Perlis	4,160	15	0.36	359	8.63	1	0.02	375	9.01
HPP, Pulau Pinang	4,527	3	0.07	272	6.01	0	0.00	275	6.07
HWKK, Likas, Sabah	15,500	27	0.17	878	5.66	0	0.00	905	5.84
HUS, Sarawak	11,639	12	0.10	1512	12.99	4	0.03	1528	13.13
HTAR, Selangor	12,718	37	0.29	1274	10.02	3	0.02	1314	10.33
HSNZ, Terengganu	14,418	63	0.44	1558	10.81	9	0.06	1630	11.31
HKL	11,282	42	0.37	777	6.89	5	0.04	824	7.30
Total	140,162	495	0.35	11950	8.53	56	0.04	12501	8.92

Table 5.1c: Incidence of Diabetes in pregnancy from SDP 2015

SDP	2015								
	Total Patients	Pre-existing Diabetes		Gestational Diabetes		NA		Diabetes in Pregnancy	
	n	n	%	n	%	n	%	n	%
HSA, Johor	14,443	48	0.33	1045	7.24	3	0.02	1096	7.59
HSB, Kedah	9,603	31	0.32	695	7.24	14	0.15	740	7.71
HRPZ II, Kelantan	11,808	31	0.26	481	4.07	0	0.00	512	4.34
Malacca Hospital	11,623	15	0.13	391	3.36	1	0.01	407	3.50
HTJ, N Sembilan	9,162	25	0.27	794	8.67	0	0.00	819	8.94
HTAA, Pahang	9,994	15	0.15	860	8.61	13	0.13	888	8.89
HRPB, Perak	7,519	32	0.43	607	8.07	29	0.39	668	8.88
HTF, Perlis	4,436	10	0.23	356	8.03	2	0.05	368	8.30
HPP, Pulau Pinang	3,673	2	0.05	209	5.69	0	0.00	211	5.74
HWKK, Likas, Sabah	15,239	19	0.12	789	5.18	1	0.01	809	5.31
HUS, Sarawak	10,656	8	0.08	1311	12.30	0	0.00	1319	12.38
HTAR, Selangor	12,889	48	0.37	999	7.75	3	0.02	1050	8.15
HSNZ, Terengganu	15,546	49	0.32	1686	10.85	8	0.05	1743	11.21
HKL	9,848	19	0.19	615	6.24	0	0.00	634	6.44
Hospital Segamat	3,307	6	0.18	273	8.26	0	0.00	279	8.44
Total	149,746	358	0.24	11111	7.42	74	0.05	11543	7.71

Table 5.2a: Diabetes in Pregnancy by Age 2013

Age	2013								
	Total Patients	Pre-existing Diabetes		Gestational Diabetes		NA		Diabetes in Pregnancy	
		n	n	%	n	%	n	%	
10-14	112	0	0.00	2	1.79	0	0.00	2	1.79
15-19	5,763	12	0.21	84	1.46	3	0.05	99	1.72
20-24	22,022	65	0.30	736	3.34	1	0.00	802	3.64
25-29	42,835	208	0.49	2,901	6.77	7	0.02	3,116	7.27
30-34	30,720	225	0.73	2,973	9.68	10	0.03	3,208	10.44
35-39	15,029	209	1.39	2,345	15.60	8	0.05	2,562	17.05
40-44	3,988	73	1.83	705	17.68	3	0.08	781	19.58
45-49	281	2	0.71	59	21.00	0	0.00	61	21.71
50-54	18	0	0.00	2	11.11	0	0.00	2	11.11
55-59	3	0	0.00	1	33.33	0	0.00	1	33.33

Table 5.2b: Diabetes in Pregnancy by Age 2014

Age	2014								
	Total Patients	Pre-existing Diabetes		Gestational Diabetes		NA		Diabetes in Pregnancy	
		n	n	%	n	%	n	%	n
10-14	130	0	0.00		2	1.54	0	0.00	2
15-19	6,709	2	0.03		138	2.06	2	0.03	142
20-24	24,984	27	0.11		893	3.57	5	0.02	925
25-29	48,892	105	0.21		3,476	7.11	14	0.03	3,595
30-34	37,068	163	0.44		3,827	10.32	12	0.03	4,002
35-39	17,420	129	0.74		2,720	15.61	17	0.10	2,866
40-44	4,614	63	1.37		836	18.12	6	0.13	905
45-49	324	6	1.85		57	17.59	0	0.00	63
50-54	20	0	0.00		1	5.00	0	0.00	1
55-59	1	0	0.00		0	0.00	0	0.00	0

Table 5.2c: Diabetes in Pregnancy by Age 2015

Age	2013								
	Total Patients	Pre-existing Diabetes		Gestational Diabetes		NA		Diabetes in Pregnancy	
		n	n	%	n	%	n	%	n
10-14	131	0	0.00		1	0.76	0	0.00	1
15-19	6,563	3	0.05		87	1.33	1	0.02	91
20-24	26,538	16	0.06		872	3.29	4	0.02	892
25-29	51,844	83	0.16		3,186	6.15	16	0.03	3,285
30-34	40,328	121	0.30		3,615	8.96	27	0.07	3,763
35-39	18,987	95	0.50		2,454	12.92	21	0.11	2,570
40-44	5,003	39	0.78		835	16.69	5	0.10	879
45-49	332	0	0.00		61	18.37	0	0.00	61
50-54	16	1	6.25		0	0.00	0	0.00	1
55-59	4	0	0.00		0	0.00	0	0.00	0

Table 5.3a: Diabetes in pregnancy by ethnicity 2013

Ethnicity	2013										
	Total Patients			Pre-existing Diabetes		Gestational Diabetes		NA		Diabetes in Pregnancy	
	n	n	%	n	%	n	%	n	%	n	%
Malay	84,503	595	0.70	7,473	8.84	26	0.03	8,094	9.58		
Chinese	5,829	49	0.84	528	9.06	3	0.05	580	9.95		
Indian	5,296	69	1.30	614	11.59	0	0.00	683	12.90		
Kadazan /Dusun	4,253	8	0.19	176	4.14	0	0.00	184	4.33		
Murut	300	0	0.00	23	7.67	0	0.00	23	7.67		
Bajau	3,289	5	0.15	119	3.62	0	0.00	124	3.77		
Melanau	35	0	0.00	2	5.71	0	0.00	2	5.71		
Iban	1,066	13	1.22	96	9.01	0	0.00	109	10.23		
Bidayuh	773	14	1.81	47	6.08	0	0.00	61	7.89		
OA Peninsular Malaysia	687	2	0.29	37	5.39	0	0.00	39	5.68		
OI Sabah & Sarawak	2,249	5	0.22	105	4.67	0	0.00	110	4.89		
Foreigner	10,091	26	0.26	476	4.72	1	0.01	503	4.98		
Others	1,849	6	0.32	91	4.92	0	0.00	97	5.25		
NA	551	2	0.36	21	3.81	2	0.36	25	4.54		

Table 5.3b: Diabetes in pregnancy by ethnicity 2014

Ethnicity	2014										
	Total Patients			Pre-existing Diabetes		Gestational Diabetes		NA		Diabetes in Pregnancy	
	n	n	%	n	%	n	%	n	%	n	%
Malay	97,764	385	0.39	8,670	8.87	50	0.05	9,105	9.31		
Chinese	7,939	18	0.23	741	9.33	2	0.03	761	9.59		
Indian	5,892	46	0.78	677	11.49	2	0.03	725	12.30		
Kadazan /Dusun	4,227	10	0.24	308	7.29	0	0.00	318	7.52		
Murut	290	1	0.34	32	11.03	0	0.00	33	11.38		
Bajau	3,192	6	0.19	167	5.23	0	0.00	173	5.42		
Melanau	51	0	0.00	6	11.76	0	0.00	6	11.76		
Iban	2,208	3	0.14	248	11.23	0	0.00	251	11.37		
Bidayuh	1,730	2	0.12	191	11.04	0	0.00	193	11.16		
OA Peninsular Malaysia	812	0	0.00	42	5.17	2	0.25	44	5.42		
OI Sabah & Sarawak	2,064	3	0.15	165	7.99	0	0.00	168	8.14		
Foreigner	11,309	18	0.16	530	4.69	0	0.00	548	4.85		
Others	2,037	3	0.15	139	6.82	0	0.00	142	6.97		
NA	647	0	0.00	34	5.26	0	0.00	34	5.26		

Table 5.3c: Diabetes in pregnancy by ethnicity 2015

Ethnicity	2015								
	Total Patients		Pre-existing Diabetes		Gestational Diabetes		NA		
	n	n	%	n	%	n	%	n	%
Malay	10,6818	282	0.26	8,183	7.66	60	0.06	8,525	7.98
Chinese	8,786	11	0.13	726	8.26	2	0.02	739	8.41
Indian	6,234	32	0.51	581	9.32	4	0.06	617	9.90
Kadazan/Dusun	4,565	8	0.18	269	5.89	0	0.00	277	6.07
Murut	333	0	0.00	17	5.11	0	0.00	17	5.11
Bajau	3,460	3	0.09	163	4.71	0	0.00	166	4.80
Melanau	67	1	1.49	5	7.46	0	0.00	6	8.96
Iban	2,029	3	0.15	217	10.69	0	0.00	220	10.84
Bidayuh	1,608	1	0.06	171	10.63	0	0.00	172	10.70
OA Peninsular Malaysia	1,124	1	0.09	39	3.47	2	0.18	42	3.74
OI Sabah & Sarawak	3,443	4	0.12	220	6.39	1	0.03	225	6.53
Foreigner	9,051	7	0.08	409	4.52	4	0.04	420	4.64
Others	1,161	2	0.17	57	4.91	0	0.00	59	5.08
NA	1,067	3	0.28	54	5.06	1	0.09	58	5.44

Table 5.4: Diabetes in pregnancy by Parity 2013-2015

Parity	2013								
	Total Patients		Pre-existing Diabetes		Gestational Diabetes		NA		
	n	n	%	n	%	n	%	n	%
1	42,071	217	0.52	2,590	6.16	13	0.03	2,820	6.70
2-5	71,778	515	0.72	6,335	8.83	15	0.02	6,865	9.56
≥ 6	6,742	61	0.90	871	12.92	4	0.06	936	13.88
NA	180	1	0.56	12	6.67	0	0.00	13	7.22
Parity	2014								
	Total Patients		Pre-existing Diabetes		Gestational Diabetes		NA		
	n	n	%	n	%	n	%	n	%
1	48,484	110	0.23	3,193	6.59	13	0.03	3,316	6.84
2-5	83,950	335	0.40	7,799	9.29	38	0.05	8,172	9.73
≥ 6	7,163	47	0.66	932	13.01	4	0.06	983	13.72
NA	565	3	0.53	26	4.60	1	0.18	30	5.31
Parity	2015								
	Total Patients		Pre-existing Diabetes		Gestational Diabetes		NA		
	n	n	%	n	%	n	%	n	%
1	52,060	97	0.19	3,100	5.95	15	0.03	3,212	6.17
2-5	90,481	243	0.27	7,256	8.02	50	0.06	7,549	8.34
≥ 6	6,242	18	0.29	709	11.36	6	0.10	733	11.74
NA	963	0	0.00	46	4.78	3	0.31	49	5.09

Table 5.5a: Diabetes in pregnancy by Mode of delivery 2013

Mode of Delivery	2013								
	Total Patients	Pre-existing Diabetes		Gestational Diabetes		NA		Diabetes in Pregnancy	
	n	n	%	n	%	n	%	n	%
Vaginal	82641	402	0.49	5,867	7.10	17	0.02	6286	7.61
SVD	82267	410	0.50	5840	7.10	17	0.02	6267	7.62
Breech	361	2	0.55	26	7.20	0	0.00	28	7.76
Instrumental	4381	21	0.48	367	8.38	1	0.02	389	8.88
Vacuum	3993	18	0.45	338	8.46	1	0.03	357	8.94
Forceps	393	3	0.76	29	7.38	0	0.00	32	8.14
Caesarean	29848	350	1.17	3,384	11.34	14	0.05	3748	12.56
LSCS	29670	349	1.18	3368	11.35	14	0.05	3731	12.57
Classical	137	1	0.73	14	10.22	0	0.00	15	10.95
Hysterotomy	30	0	0.00	2	6.67	0	0.00	2	6.67
Others	7	0	0.00	0	0.00	0	0.00	0	0.00
NA	3901	21	0.54	190	4.87	0	0.00	211	5.41

Table 5.5b: Diabetes in pregnancy by Mode of delivery 2014

Mode of Delivery	2014								
	Total Patients	Pre-existing Diabetes		Gestational Diabetes		NA		Diabetes in Pregnancy	
	n	n	%	n	%	n	%	n	%
Vaginal	96149	166	0.17	7,107	7.39	22	0.02	7,295	7.6
SVD	95652	166	0.17	7062	7.38	22	0.02	7,250	7.6
Breech	462	0	0.00	40	8.66	0	0.00	40	8.7
Instrumental	5636	9	0.16	405	7.19	4	0.07	418	7.4
Vacuum	5147	9	0.17	360	6.99	4	0.08	373	7.2
Forceps	497	0	0.00	45	9.05	0	0.00	45	9.1
Caesarean	34829	300	0.86	4,244	12.19	28	0.08	4,572	13.1
LSCS	34571	398	1.15	4225	12.22	28	0.08	4,651	13.5
Classical	189	1	0.53	13	6.88	0	0.00	14	7.4
Hysterotomy	24	1	4.17	2	8.33	0	0.00	3	12.5
Others	9	0	0.00	0	0.00	0	0.00	0	0.0
NA	3548	20	0.56	194	5.47	2	0.06	216	6.1

Table 5.5c: Diabetes in pregnancy by Mode of delivery 2015

Mode of Delivery	2015								
	Total Patients			Pre-existing Diabetes		Gestational Diabetes		NA	
	n	n	%	n	%	n	%	n	%
Vaginal	101393	131	0.13	6,598	6.51	36	0.04	6,765	6.7
SVD	100973	129	0.13	6569	6.51	36	0.04	6,734	6.7
Breech	401	2	0.50	27	6.73	0	0.00	29	7.2
Instrumental	6050	10	0.17	422	6.98	1	0.02	433	7.2
Vacuum	5632	9	0.16	389	6.91	1	0.02	399	7.1
Forceps	426	1	0.23	33	7.75	0	0.00	34	8.0
Caesarean	38552	201	0.52	3,903	10.12	33	0.09	4,137	10.7
LSCS	38386	201	0.52	3890	10.13	33	0.09	4,124	10.7
Classical	101	0	0.00	9	8.91	0	0.00	9	8.9
Hysterotomy	21	0	0.00	2	9.52	0	0.00	2	9.5
Others	44	0	0.00	2	4.55	0	0.00	2	4.5
NA	3751	16	0.43	188	5.01	4	0.11	208	5.5

Table 5.6a: Baby weight in Pregnancy complicated by Diabetes 2013

Birth Weight (grams)	2013								
	Total Patients			Pre-existing Diabetes		Gestational Diabetes		NA	
	n	n	%	n	%	n	%	n	%
≤ 1000	1,313	8	0.61	78	5.94	0	0.00	86	6.55
1001 - 1500	1,362	9	0.66	103	7.56	0	0.00	112	8.22
1501 - 2000	3,445	24	0.70	229	6.65	1	0.03	254	7.37
2001 - 2500	14,032	95	0.68	996	7.10	5	0.04	1,096	7.81
2501 - 3000	42,686	239	0.56	3,140	7.36	10	0.02	3,389	7.94
3001 - 3500	41,014	252	0.61	3,507	8.55	10	0.02	3,769	9.19
3501 - 3999	11,630	102	0.88	1,231	10.58	2	0.02	1,335	11.48
≥ 4000	2,524	49	1.94	429	17.00	3	0.12	481	19.06
NA	4,090	23	0.56	208	5.09	1	0.02	232	5.67

Table 5.6b: Baby weight in Pregnancy complicated by Diabetes 2014

Birth Weight (grams)	2014								
	Total Patients		Pre-existing Diabetes		Gestational Diabetes		NA		
	n	n	%	n	%	n	%	n	%
≤ 1000	1,440	10	0.69	105	7.29	1	0.07	116	8.06
1001 - 1500	1,471	9	0.61	85	5.78	2	0.14	96	6.53
1501 - 2000	3,950	17	0.43	324	8.20	2	0.05	343	8.68
2001 - 2500	16,175	53	0.33	1227	7.59	3	0.02	1,283	7.93
2501 - 3000	50,337	115	0.23	3,941	7.83	18	0.04	4,074	8.09
3001 - 3500	52,408	177	0.34	4,503	8.59	19	0.04	4,699	8.97
3501 - 3999	13,039	74	0.57	1,424	10.92	11	0.08	1,509	11.57
≥ 4000	2,837	41	1.45	479	16.88	1	0.04	521	18.36
NA	0	0	0.00	0	0.00	0	0.00	0	0.00

Table 5.6c: Baby weight in Pregnancy complicated by Diabetes 2015

Birth Weight (grams)	2015								
	Total Patients		Pre-existing Diabetes		Gestational Diabetes		NA		
	n	n	%	n	%	n	%	n	%
≤ 1000	1,563	8	0.51	72	4.61	1	0.06	81	5.18
1001 - 1500	1,597	9	0.56	114	7.14	1	0.06	124	7.76
1501 - 2000	4,186	25	0.60	300	7.17	0	0.00	325	7.76
2001 - 2500	17,868	41	0.23	1173	6.56	6	0.03	1,220	6.83
2501 - 3000	54,026	93	0.17	3,697	6.84	28	0.05	3,818	7.07
3001 - 3500	49,631	96	0.19	3,796	7.65	27	0.05	3,919	7.90
3501 - 3999	13,605	48	0.35	1,355	9.96	5	0.04	1,408	10.35
≥ 4000	2,794	23	0.82	378	13.53	0	0.00	401	14.35
NA	5,998	20	0.00	347	0.00	6	0.00	0	0.00

Table 5.7: Macrosomia in relation to Diabetes and non Diabetes in Pregnancy 2013-2015

Baby weight	2013			
	Diabetes in pregnancy		No Diabetes	
	n	%	n	%
Birth Weight ≥ 4 kg	713	6.63	5901	5.30
Birth Weight < 4 kg	10041	93.37	105441	94.70
Baby weight	2014			
	Diabetes in pregnancy		No Diabetes	
	n	%	n	%
Birth Weight ≥ 4 kg	842	6.66	6780	5.26
Birth Weight < 4 kg	11799	93.34	122236	94.74
Baby weight	2015			
	Diabetes in pregnancy		No Diabetes	
	n	%	n	%
Birth Weight ≥ 4 kg	774	6.63	8018	5.74
Birth Weight < 4 kg	10895	93.37	131581	94.26

Table 5.8a: Shoulder dystocia and Birth Asphyxia in relation to baby weight 2013

Birth Weight (grams)	2013								
	Total Deliveries	Shoulder Dystocia				Asphyxia			
		n	n	%	n	%	n	%	
≤ 1000	1,313	0	0.00	0	0.00	14	1.07	207	15.77
1001 - 1500	1,362	0	0.00	0	0.00	12	0.88	179	13.14
1501 - 2000	3,445	0	0.00	0	0.00	23	0.67	151	4.38
2001 - 2500	14,032	0	0.00	0	0.00	37	0.26	239	1.70
2501 - 3000	42,686	2	0.00	5	0.01	53	0.12	550	1.29
3001 - 3500	41,014	12	0.03	40	0.10	35	0.09	473	1.15
3501 - 3999	11,630	17	0.15	60	0.52	32	0.28	141	1.21
≥ 4000	2,524	21	0.83	39	1.55	9	0.36	33	1.31
NA	4,090	0	0.00	0	0.00	0	0.00	15	0.37

Table 5.8b: Shoulder dystocia and Birth Asphyxia in relation to baby weight 2014

Birth Weight (grams)	2014								
	Total of Deliveries	Shoulder Dystocia				Asphyxia			
		n	n	%	n	%	n	%	
≤ 1000	1,440	0	0.00	0	0.00	18	1.25	248	17.22
1001 - 1500	1,471	0	0.00	1	0.07	11	0.75	201	13.66
1501 - 2000	3,950	0	0.00	0	0.00	22	0.56	231	5.85
2001 - 2500	16,175	0	0.00	1	0.01	34	0.21	361	2.23
2501 - 3000	50,337	2	0.00	10	0.02	61	0.12	808	1.61
3001 - 3500	52,408	10	0.02	28	0.05	59	0.11	757	1.44
3501 - 3999	13,039	14	0.11	60	0.46	32	0.25	226	1.73
≥ 4000	2,837	15	0.53	38	1.34	10	0.35	60	2.11
NA	0	0	0.00	0	0.00	0	0.00	0	0.00

Table 5.8c: Shoulder dystocia and Birth Asphyxia in relation to baby weight 2015

Birth Weight (grams)	2015								
	Total Deliveries	Shoulder Dystocia				Asphyxia			
		n	n	%	n	%	n	%	
≤ 1000	1,563	0	0.00	0	0.00	22	1.41	343	21.94
1001 - 1500	1,597	0	0.00	0	0.00	30	1.88	317	19.85
1501 - 2000	4,186	0	0.00	0	0.00	36	0.86	349	8.34
2001 - 2500	17,868	1	0.01	2	0.01	46	0.26	593	3.32
2501 - 3000	54,026	3	0.01	6	0.01	117	0.22	1,194	2.21
3001 - 3500	49,631	11	0.02	35	0.07	115	0.23	1,187	2.39
3501 - 3999	13,605	19	0.14	68	0.50	46	0.34	373	2.74
≥ 4000	2,794	18	0.64	51	1.83	21	0.75	84	3.01
NA	5,998	0	0.00	7	0.12	12	0.20	109	1.82

Table 5.9: Apgar score in relation to Vaginal and Instrumental delivery in Diabetes in pregnancy 2013-2015

Mode of Delivery	2013							
	Total Deliveries	Apgar Score 1min ≤ 7				Apgar Score 5min ≤ 7		
		Pre-existing Diabetes		Gestational Diabetes		Pre-existing Diabetes		Gestational Diabetes
	n	n	%	n	%	n	%	n
Vaginal	83,185	16	0.02	221	0.27	5	0.01	42
Instrumental	4,399	6	0.14	67	1.52	1	0.02	10
Mode of Delivery	2014							
	Total Deliveries	Apgar Score 1min ≤ 7				Apgar Score 5min ≤ 7		
		Pre-existing Diabetes		Gestational Diabetes		Pre-existing Diabetes		Gestational Diabetes
	n	n	%	n	%	n	%	n
Vaginal	96,756	12	0.01	252	0.26	3	0.00	51
Instrumental	5,665	2	0.04	71	1.25	0	0.00	9
Mode of Delivery	2015							
	Total Deliveries	Apgar Score 1min ≤ 7				Apgar Score 5min ≤ 7		
		Pre-existing Diabetes		Gestational Diabetes		Pre-existing Diabetes		Gestational Diabetes
	n	n	%	n	%	n	%	n
Vaginal	101,985	8	0.01	113	0.11	2	0.00	40
Instrumental	6,075	3	0.05	56	0.92	1	0.02	7

BREECH SECTION

Table 6.1: Distribution of Breech delivery by SDP 2013-2015

SDP	2013			2014			2015		
	Total delivery		Breech	Total delivery		Breech	Total delivery		Breech
	n	n	%	n	n	%	n	n	%
HSA, Johor	7,799	232	3.0	10,872	354	3.3	14,443	445	3.1
HSB, Kedah	10,129	269	2.7	9,273	303	3.3	9,603	254	2.6
HRPZ II Kelantan	11,913	284	2.4	12,298	270	2.2	11,808	268	2.3
Malacca Hospital	10,533	234	2.2	10,929	240	2.2	11,623	272	2.3
HTJ, N Sembilan	4,809	124	2.6	8,264	187	2.3	9,162	235	2.6
HTAA, Pahang	7,884	194	2.5	7,897	196	2.5	9,994	241	2.4
HRPB, Ipoh	4,028	281	7.0	6,385	299	4.7	7,519	316	4.2
HTF, Perlis	3,868	90	2.3	4,160	120	2.9	4,436	149	3.4
HPP,Pulau Pinang	3,672	135	3.7	4,527	117	2.6	3,673	99	2.7
HWKK, Likas, Sabah	15,220	367	2.4	15,500	431	2.8	15,239	427	2.8
HUS,Sarawak	4,481	139	3.1	11,639	367	3.2	10,656	312	2.9
HTAR, Selangor	11,986	397	3.3	12,718	408	3.2	12,889	429	3.3
HSNZ, Terengganu	13,620	421	3.1	14,418	401	2.8	15,546	423	2.7
HKL	10,829	319	2.9	11,282	335	3.0	9,848	268	2.7
Hospital Segamat	-	-	-	-	-	-	3,307	57	1.7
Total	120,771	3,486	2.9	140,162	4,028	2.9	149,746	4,195	2.8

Table 6.2a: Distribution of Breech delivery by Ethnicity 2013-2014

Ethnicity	2013						2014					
	Total delivery	Vaginal Breech		Caesarean Breech		Total Breech	Total delivery	Vaginal Breech		Caesarean Breech		Total Breech
		n	n	%	n			n	n	%	n	
Malay	84,503	238	0.3	2,179	2.6	2,417	2.9	97,764	327	0.4	2,380	2.8
Chinese	5,829	17	0.3	185	3.2	202	3.5	7,939	15	0.3	246	4.2
Indian	5,296	25	0.5	131	2.5	156	2.9	5,892	17	0.3	176	3.3
Kadazan/ Dusun	4,253	6	0.1	105	2.5	111	2.6	4,227	13	0.3	111	2.6
Murut	300	1	0.3	3	1.0	4	1.3	290	0	0.0	8	2.7
Bajau	3,289	7	0.2	57	1.7	64	1.9	3,192	10	0.3	59	1.8
Melanau	35	1	2.9	27	77.1	28	80.0	51	0	0.0	1	2.9
Iban	1066	5	0.5	29	2.7	34	3.2	2208	8	0.8	73	6.8
Bidayuh	773	1	0.1	34	4.4	35	4.5	1730	5	0.6	55	7.1
OA Peninsular Malaysia	687	0	0.0	55	8.0	55	8.0	812	4	0.6	43	6.3
OI Sabah & Sarawak	2,249	10	0.4	249	11.1	259	11.5	2,064	6	0.3	56	2.5
Foreigner	10,091	45	0.4	54	0.5	99	1.0	11,309	47	0.5	280	2.8
Others	1,849	5	0.3	3	0.2	8	0.4	2,037	5	0.3	64	3.5
NA	551	0	0.0	14	2.5	14	2.5	647	5	0.9	14	2.5
											19	3.4

Table 6.2b: Distribution of Breech delivery by Ethnicity 2015

Ethnicity	2015						
	Total delivery	Vaginal Breech		Caesarean Breech		Total Breech	
	n	n	%	n	%	n	%
Malay	106,818	264	0.2	2,600	2.4	2,864	2.7
Chinese	8,786	22	0.3	282	3.2	304	3.5
Indian	6,234	21	0.3	145	2.3	166	2.7
Kadazan/ Dusun	4,565	11	0.2	108	2.4	119	2.6
Murut	333	2	0.6	14	4.2	16	4.8
Bajau	3,460	2	0.1	91	2.6	93	2.7
Melanau	67	1	1.5	5	7.5	6	9.0
Iban	2029	4	0.2	70	3.4	74	3.6
Bidayuh	1608	0	0.0	55	3.4	55	3.4
OA Peninsular Malaysia	1124	1	0.1	41	3.6	42	3.7
OI Sabah & Sarawak	3,443	12	0.3	91	2.6	103	3.0
Foreigner	9,051	50	0.6	249	2.8	299	3.3
Others	1,161	3	0.3	25	2.2	28	2.4
NA	1067	8	0.7	18	1.7	26	2.4

Table 6.3a: Distribution of Breech delivery by Age 2013

Age	2013						
	Total delivery	Vaginal Breech		Caesarean Breech		Total Breech	
		n	n	%	n	n	%
10-14	112	2	1.8	2	1.8	4	3.6
15-19	5,763	20	0.3	108	1.9	128	2.2
20-24	22,022	56	0.3	487	2.2	543	2.5
25-29	42,835	104	0.2	1,105	2.6	1,209	2.8
30-34	30,720	105	0.3	822	2.7	927	3.0
35-39	15,029	51	0.3	455	3.0	506	3.4
40-44	3,988	21	0.5	135	3.4	156	3.9
45-49	281	2	0.7	9	3.2	11	3.9
50-54	18	0	0.0	1	5.6	1	5.6
>=55	3	0	0.0	1	33.3	1	33.3

Table 6.3b: Distribution of Breech delivery by Age 2014

Age	2014						
	Total delivery	Vaginal Breech		Caesarean Breech		Total Breech	
	n	n	%	n	%	n	%
10-14	130	1	0.9	2	1.8	3	2.7
15-19	6,709	18	0.3	134	2.3	152	2.6
20-24	24,984	82	0.4	539	2.4	621	2.8
25-29	48,892	138	0.3	1,246	2.9	1,384	3.2
30-34	37,068	122	0.4	957	3.1	1,079	3.5
35-39	17,420	78	0.5	534	3.6	612	4.1
40-44	4,614	23	0.6	145	3.6	168	4.2
45-49	324	0	0.0	9	3.2	9	3.2
50-54	20	0	0.0	0	0.0	0	0.0
>=55	1	0	0.0	0	0.0	0	0.0

Table 6.3c: Distribution of Breech delivery by Age 2015

Age	2015						
	Total delivery	Vaginal Breech		Caesarean Breech		Total Breech	
	n	n	%	n	%	n	%
10-14	131	2	1.8	3	2.7	5	4.5
15-19	6,563	25	0.4	119	2.1	144	2.5
20-24	26,538	66	0.3	612	2.8	678	3.1
25-29	51,844	127	0.3	1,291	3.0	1,418	3.3
30-34	40,328	98	0.3	1,007	3.3	1,105	3.6
35-39	18,987	65	0.4	576	3.8	641	4.3
40-44	5,003	16	0.4	173	4.3	189	4.7
45-49	332	2	0.7	13	4.6	15	5.3
50-54	16	0	0.0	0	0.0	0	0.0
>=55	4	0	0.0	0	0.0	0	0.0

Table 6.4a: Distribution of Breech delivery by birth weight and Apgar score 2013

Birth weight (grams)	2013													
	Total deliveries	Vaginal			Apgar score				Caesarean		Apgar score			
		Breech		1min ≤7		5min ≤7		Breech		1min ≤7		5min ≤7		
	n	n	%	n	%	n	%	n	%	n	%	n	%	
<1000	1,313	93	7.1	26	2.0	16	1.2	27	2.1	14	1.1	4	0.3	
1001-1500	1,362	51	3.7	19	1.4	7	0.5	49	3.6	18	1.3	10	0.7	
1501-2000	3,445	62	1.8	12	0.3	3	0.1	158	4.6	38	1.1	5	0.1	
2001-2500	14,032	90	0.6	14	0.1	1	0.0	670	4.8	67	0.5	4	0.0	
2501-3000	42,686	91	0.2	22	0.1	3	0.0	1,176	2.8	95	0.2	4	0.0	
3001-3500	41,014	27	0.1	6	0.0	1	0.0	831	2.0	54	0.1	3	0.0	
3501-4000	11,630	5	0.0	3	0.0	0	0.0	184	1.6	8	0.1	1	0.0	
>4000	2,524	1	0.0	1	0.0	0	0.0	51	2.0	7	0.3	1	0.0	
NA	4,090	1	0.0	0	0.0	0	0.0	4	0.1	3	0.1	0	0.0	

Table 6.4b: Distribution of Breech delivery by birth weight and Apgar score 2014

Birth weight (grams)	2014													
	Total deliveries	Vaginal			Apgar score				Caesarean		Apgar score			
		Breech		1min ≤7		5min ≤7		Breech		1min ≤7		5min ≤7		
	n	n	%	n	%	n	%	n	%	n	%	n	%	
<1000	1,440	135	9.4	49	3.4	35	2.4	37	2.6	17	1.2	6	0.4	
1001-1500	1,471	46	3.1	14	1.0	6	0.4	66	4.5	29	2.0	7	0.5	
1501-2000	3,950	79	2.0	18	0.5	10	0.3	206	5.2	58	1.5	11	0.3	
2001-2500	16,175	113	0.7	21	0.1	5	0.0	730	4.5	70	0.4	9	0.1	
2501-3000	50,337	103	0.2	17	0.0	3	0.0	1,433	2.8	116	0.2	9	0.0	
3001-3500	52,408	40	0.1	12	0.0	2	0.0	922	1.8	52	0.1	6	0.0	
3501-4000	13,039	3	0.0	0	0.0	0	0.0	175	1.3	18	0.1	0	0.0	
>4000	2,837	1	0.0	0	0.0	0	0.0	45	1.6	6	0.2	0	0.0	

Table 6.4c: Distribution of Breech delivery by birth weight and Apgar score 2015

Birth weight (grams)	Total deliveries	2015											
		Vaginal		Apgar score				Caesarean		Apgar score			
		Breech		1min ≤7		5min ≤7		Breech		1min ≤7		5min ≤7	
n	%	n	%	n	%	n	%	n	%	n	%	n	%
<1000	1,563	133	8.5	32	2.0	17	1.1	33	2.1	10	0.6	5	0.3
1001-1500	1,597	56	3.5	12	0.8	2	0.1	69	4.3	24	1.5	4	0.3
1501-2000	4,186	58	1.4	6	0.1	1	0.0	220	5.3	24	0.6	3	0.1
2001-2500	17,868	84	0.5	13	0.1	5	0.0	814	4.6	50	0.3	6	0.0
2501-3000	54,026	91	0.2	15	0.0	4	0.0	1,483	2.7	47	0.1	3	0.0
3001-3500	49,631	47	0.1	6	0.0	2	0.0	906	1.8	29	0.1	3	0.0
3501-4000	13,605	5	0.0	2	0.0	1	0.0	221	1.6	16	0.1	0	0.0
>4000	2,794	3	0.1	2	0.1	1	0.0	42	1.5	0	0.0	1	0.0
NA	5,998	3	0.1	1	0.0	0	0.0	47	0.8	2	0.0	0	0.0

Table 6.5: ECV and breech 2013-2015

Year	Total	ECV								Vaginal	
	Deliveries	Successful		Not Successful		Not Done		NA		Breech	
		n	n	%	n	%	n	%	n	%	
2013	3,571	13	0.4	190	5.3	2,749	77.0	619	17.3	421	11.8
2014	4,134	21	0.5	205	5.0	2,944	71.2	964	23.3	520	12.6
2015	4,315	14	0.3	172	4.0	3,266	75.7	863	20.0	480	11.1

Table 6.6: Complications in Vaginal Breech delivery 2013-2015

Complications of pregnancy and delivery	2013			2014			2015		
	Total deliveries	Vaginal Breech		Total deliveries	Vaginal Breech		Total deliveries	Vaginal Breech	
		n	n	%	n	n	%	n	%
Congenital Abnormality	122	14	11.5	112	17	15.2	273	32	11.7
Prematurity	14,062	248	1.8	16,051	304	1.9	4,921	126	2.6
IUD	612	6	1.0	554	5	0.9	1,503	127	8.4
Genital tract trauma	36,696	116	0.3	42,478	120	0.3	193	1	0.5
Birth injuries	36	0	0.0	43	0	0.0	27	0	0.0

Table 6.7: Complications in Caesarean breech delivery 2013-2015

Complications of pregnancy and delivery	2013			2014			2015		
	Total deliveries	Caesarean Breech		Total deliveries	Caesarean Breech		Total deliveries	Caesarean Breech	
		n	n		n	n		n	%
Congenital Abnormality	122	0	-	112	2	1.79	273	4	1.47
Prematurity	14,062	794	5.65	16,051	939	5.85	4,921	251	5.10
IUD	612	29	4.74	554	31	5.60	1,503	14	0.93
Birth injuries	36	2	5.56	43	1	2.33	27	1	3.70

PREMATURITY

Table 7.1: Distribution of Preterm deliveries by SDP 2013-2015

SDP	2013			2014			2015			
	Total Delivery		Preterm Delivery		Total Delivery	Preterm Delivery		Total Delivery	Preterm Delivery	
	n	n	%	n	n	%	n	n	%	
HSA,Johor	7,897	1,771	22.4	11,001	2,265	20.6	14,600	1,886	12.9	
HSB, Kedah	10,239	2087	20.4	9,362	1,947	20.8	9,704	972	10.0	
HRPZ II,Kelantan	12,017	2,213	18.4	12,396	2,130	17.2	11,908	1,225	10.3	
Malacca Hospital	10,630	2,655	25.0	11,019	2,818	25.6	11,733	1,415	12.1	
HTJ, N Sembilan	4,859	1480	30.5	8,343	2349	28.2	9,240	997	10.8	
HTAA, Pahang	7,959	1,647	20.7	7,982	1694	21.2	10,091	1195	11.8	
HRPB, Perak	4,107	1182	28.8	6,488	1599	24.6	7,607	1087	14.3	
HTF, Perlis	3,898	898	23.0	4,184	1042	24.9	4,479	570	12.7	
HPP,Pulau Pinang	3,721	807	21.7	4,574	978	21.4	3,712	598	16.1	
HWKK, Likas, Sabah	15,392	2743	17.8	15,702	3125	19.9	15,441	2063	13.4	
Hospital Umum Sarawak	4,530	1,131	25.0	11,745	2295	19.5	10,739	1213	11.3	
HTAR, Selangor	12,144	3,042	25.0	12,863	3,108	24.2	13,036	1,858	14.3	
HSNZ, Terengganu	13,746	2,707	19.7	14,572	2,991	20.5	15,693	1,932	12.3	
HKL	10,957	2,633	24.0	11,426	2,645	23.1	9,956	1,470	14.8	
Hospital Segamat	-	-	-	-	-	-	3,329	348	10.5	
Total	122,096	26,996	22.1	141,657	30,986	21.9	151,268	18,829	12.4	

Table 7.2: Distribution of Preterm deliveries by Age and Parity 2013-2015

Age	2013				2014				2015			
	Total Delivery		Preterm Delivery		Total Delivery		Preterm Delivery		Total Delivery		Preterm Delivery	
	n	%	n	%	n	%	n	%	n	%	n	%
10-14	115	0.1	49	42.6	130	0.1	47	36.2	131	0.1	26	19.8
15-19	5,810	4.9	1,571	27.0	6,750	4.8	1,821	27.0	6,615	4.4	1,160	17.5
20-24	22,224	18.2	4,813	21.7	25,208	17.8	5,419	21.5	26,768	17.7	3,396	12.7
25-29	43,288	35.5	8,535	19.7	49,423	34.9	9,780	19.8	52,346	34.6	5,716	10.9
30-34	31,106	25.5	6,727	21.6	37,492	26.5	7,952	21.2	40,790	27.0	4,795	11.8
35-39	15,208	12.5	4,014	26.4	17,644	12.5	4,521	25.6	19,208	12.7	2,770	14.4
40-44	4,037	3.3	1,188	29.4	4,658	3.3	1,339	28.7	5,056	3.3	902	17.8
45-49	287	0.2	93	32.4	330	0.2	101	30.6	333	0.2	60	18.0
50-54	18	0.0	4	22.2	21	0.0	5	23.8	16	0.0	2	12.5
55-59	3	0.0	2	66.7	1	0.0	1	100.0	5	0.0	2	40.0
Parity												
1	42,546	34.8	9,434	22.2	49,022	34.6	10,920	22.3	52,597	34.8	6,849	13.0
2 - 5	72,549	59.4	15,821	21.8	84,816	59.9	18,167	21.4	91,393	60.4	10,872	11.9
≥ 6	6,821	5.6	1,716	25.2	7,250	5.1	1,816	25.0	6,311	4.2	1,005	15.9
NA	180	0.1	25	13.9	569	0.4	83	14.6	967	0.6	103	10.7

Table 7.3: Distribution of Preterm deliveries by Ethnicity 2013- 2015

Ethnicity	2013			2014			2015		
	Total Delivery	Preterm Delivery		Total Delivery	Preterm Delivery		Total Delivery	Preterm Delivery	
	n	n	%	n	n	%	n	n	%
Malay	85,358	19,094	22.4	98,765	21,844	22.1	107,812	13,151	12.2
Chinese	5,916	1309	22.1	8,037	1635	20.3	8,932	1047	11.7
Indian	5,377	1492	27.7	5,979	1631	27.3	6,309	934	14.8
Kadazan/ Dusun	4,302	793	18.4	4,291	859	20.0	4,620	603	13.1
Murut	302	45	14.9	291	62	21.3	335	37	11.0
Bajau	3,314	581	17.5	3,219	661	20.5	3,501	503	14.4
Melanau	35	11	31.4	51	11	21.6	68	8	11.8
Iban	1,081	322	29.8	2,221	474	21.3	2,051	302	14.7
Bidayuh	781	189	24.2	1,741	346	19.9	1,617	155	9.6
OA Peninsular Malaysia	696	236	33.9	820	260	31.7	1,133	221	19.5
OI Sabah & Sarawak	2,283	460	20.1	2,092	433	20.7	3,501	478	13.7
Foreigner	10,217	2,057	20.1	11,433	2,213	19.4	9,143	1,116	12.2
Others	1,876	296	15.8	2,062	432	21.0	1,172	139	11.9
NA	558	111	19.9	655	125	19.1	1,074	135	12.6

Table 7.4: Distribution of Preterm deliveries by Accoucher 2013-2015

Accoucher	2013			2014			2015		
	Total Deliveries	Preterm Delivery		Total Deliveries	Preterm Delivery		Total Deliveries	Preterm Delivery	
		n	n		n	n		n	n
Specialist	3,502	1,504	42.9	3,849	1,592	41.4	4,036	1,092	27.1
MO with > 6 months O&G experience	40,676	11,452	28.2	50,289	13,442	26.7	50,236	7,895	15.7
MO with < 6 months O&G experience	2,978	724	24.3	2,476	539	21.8	1,441	220	15.3
MO with no O&G experience	297	69	23.2	169	43	25.4	9,740	1,566	16.1
Staff Nurse	35,591	5,991	16.8	38,767	7,113	18.3	45,360	4,441	9.8
Community Nurse / Government Midwife	19,199	3,263	17.0	27,780	4,571	16.5	25,221	1,998	7.9
Other MO	219	51	23.3	334	68	20.4	522	44	8.4
HO	14,450	2,913	20.2	13,422	2,673	19.9	9,802	1,008	10.3
Consultant	-	-	-	-	-	-	14	3	21.4
Others	937	163	17.4	506	86	17.0	995	89	8.9
NA	4,052	822	20.3	3,795	823	21.7	3,901	473	12.1

*In 2013 and 2014 Specialist and Consultant were grouped together.

Table 7.5: Possible contributing factors for Preterm deliveries 2013-2015

Medical History	2013			2014			2015		
	Total Delivery	Preterm Delivery		Total Delivery	Preterm Delivery		Total Delivery	Preterm Delivery	
	n	n	%	n	n	%	n	n	%
Diabetes	10,754	2,902	27.0	12,641	3,251	25.7	11,669	1,600	13.7
Pre-existing	801	268	33.5	496	230	46.4	363	101	27.8
Gestational	9,921	2,624	26.4	12,088	3000	24.8	11,232	1492	13.3
Hypertension	4,549	1,954	43.0	4,475	1,917	42.8	4,086	1,224	30.0
Pre-existing	906	406	44.8	783	334	42.7	754	213	28.2
Gestational	3,202	1288	40.2	3,212	1322	41.2	2,811	817	29.1
PIH without Proteinuria	2,024	635	31.4	1,913	620	32.4	1,658	292	17.6
Pre Eclampsia	748	495	66.2	683	429	62.8	626	308	49.2
Eclampsia	47	29	61.7	56	28	50.0	54	29	53.7
Chronic HPT with superimpose PE	344	232	67.4	353	211	59.8	384	151	39.3
Unclassified	32	4	12.5	37	17	45.9	39	14	35.9
Heart Disease	672	194	28.9	640	194	30.3	513	66	12.9
NYHA I	338	83	24.6	316	87	27.5	263	35	13.3
NYHA II	66	24	36.4	38	13	34.2	35	6	17.1
NYHA III	8	7	87.5	8	5	62.5	5	1	20.0
NYHA IV	3	2	66.7	2	2	100.0	0	0	0.0
TB	67	25	37.3	76	15	19.7	68	11	16.2
Blood Disorder	1,069	235	22.0	1,825	404	22.1	1,505	198	13.2
Collagen Disease	5	2	40.0	5	1	20.0	3	1	33.3
Asthma	1,870	481	25.7	2,234	483	21.6	1,964	256	13.0
Renal Disease	39	19	48.7	42	27	64.3	67	29	43.3
Others	5,240	1,354	25.8	6,269	1,467	23.4	5,085	714	14.0

Table 7. 6: Birthweight in relation to Preterm deliveries 2013-2015

Birth weight (grams)	2013			2014			2015		
	Total Deliveries	Preterm Delivery		Total Deliveries	Preterm Delivery		Total Deliveries	Preterm Delivery	
		n	n		n	n		n	n
≤ 1000	1,313	914	3.4	1,440	1,007	3.2	1,563	1,064	5.7
1001 - 1500	1,362	1,207	4.5	1,471	1,236	4.0	1,597	1,393	7.4
1501 - 2000	3,445	2,761	10.2	3,950	3,137	10.1	4,186	2,955	15.7
2001 - 2500	14,032	6,986	25.9	16,175	7,917	25.6	17,868	5,439	28.9
2501 - 3000	42,686	8,982	33.3	50,337	10,626	34.3	54,026	4,738	25.2
3001 - 3500	41,014	4,162	15.4	52,408	5,843	18.9	49,631	1,911	10.1
3501 - 4000	11,630	879	3.3	13,039	920	3.0	13,605	436	2.3
≥ 4001	2,524	275	1.0	2,837	300	1.0	2,794	134	0.7

Table 7.7: Mode of delivery in Preterm births 2013-2015

Mode of delivery	2013			2014			2015		
	Total Deliveries	Preterm Delivery		Total Deliveries	Preterm Delivery		Total Deliveries	Preterm Delivery	
	n	n	%	n	n	%	n	n	%
Vaginal	83,185	15,923	59.0	96,756	18,580	60.0	101,985	10,843	35.0
SVD	82,750	15,623	57.9	96,197	18,224	58.8	101,486	10,548	34.0
Breech	421	296	1.1	520	343	1.1	480	293	0.9
NA	14	4	0.0	39	13	0.0	19	2	0.0
Instrumental	4,399	559	2.1	5,665	749	2.4	6,075	372	1.2
Forceps	395	75	0.3	503	92	0.3	5,654	319	1.0
Vacuum	4,009	486	1.8	5,171	658	2.1	429	53	0.2
Caesarean	30,571	9,711	36.0	35,649	10,870	35.1	39,419	7,138	23.0
Classical	138	52	0.2	193	65	0.2	102	32	0.1
Hysterotomy	30	27	0.1	24	21	0.1	21	14	0.0
LSCS	30,391	9,631	35.7	35,385	10,775	34.8	39,250	7,082	22.9
Others	27	12	0.0	25	18	0.1	24	9	0.0
NA	3,914	791	2.9	3,562	769	2.5	3,765	467	1.5

Table 7.8: Status of Preterm babies 2013-2015

Baby discharged to	2013			2014			2015		
	Total Delivery		Preterm Delivery	Total Delivery		Preterm Delivery	Total Delivery		Preterm Delivery
	n	n	%	n	n	%	n	n	%
Mother	90,689	15,689	17.3	106,164	18,535	17.5	112,538	9,122	8.1
Admitted to NICU	10,228	4,566	44.6	12,200	5,245	43.0	13,546	4,679	34.5
Nursery	16,158	5,232	32.4	18,295	5,601	30.6	19,224	3,708	19.3
Mortuary	829	642	77.4	991	714	72.0	1031	725	70.3
NA	4,192	867	20.7	4,007	891	22.2	4,929	595	12.1

ANEMIA IN PREGNANCY

Table 8.1a: Distribution of Anaemia at booking and delivery by SDP 2013

SDP	2013				
	Total women	Anemia			
		Booking		Delivery	
	n	n	%	n	%
HSA, Johor	7,799	2,075	26.6	204	2.6
HSB, Kedah	10,129	2,447	24.2	998	9.9
HRPZ II, Kelantan	11,913	3,725	31.3	47	0.4
Malacca Hospital	10,533	3,286	31.2	1,128	10.7
HTJ, N Sembilan	4,809	1,236	25.7	29	0.6
HTAA, Pahang	7,884	2,073	26.3	603	7.6
HRPB, Perak	4,028	1,023	25.4	737	18.3
HTF, Perlis	3,868	1,137	29.4	737	19.1
HPP. Pulau Pinang	3,672	1,247	34.0	959	26.1
HWKK, Likas	15,220	8,465	55.6	4,981	32.7
HUS,Sarawak	4,481	1,052	23.5	61	1.4
HTAR, Selangor	11,986	3,396	28.3	1,304	10.9
HSNZ, Terengganu	13,620	2,682	19.7	1,737	12.8
HKL	10,829	3,722	34.4	2,141	19.8
Hospital Segamat	-	-	-	-	-
Total	120,771	37,566	31.1	15,666	13.0

Table 8.1b: Distribution of Anaemia at booking and delivery by SDP 2014 - 2015

SDP	2014					2015				
	Total women	Anemia				Total women	Anemia			
		Booking		Delivery			Booking		Delivery	
	n	n	%	n	%	n	n	%	n	%
HSA, Johor	10,872	1,894	17.4	54	0.5	14,443	2,532	17.5	11	0.1
HSB, Kedah	9,273	1,578	17.0	215	2.3	9,603	1,608	16.7	194	2.0
HRPZ II, Kelantan	12,298	1,593	13.0	263	2.1	11,808	1,028	8.7	313	2.7
Malacca Hospital	10,929	1,205	11.0	431	3.9	11,623	1,179	10.1	325	2.8
HTJ, N Sembilan	8,264	1,461	17.7	60	0.7	9,162	1,176	12.8	78	0.9
HTAA, Pahang	7,897	955	12.1	185	2.3	9,994	1,302	13.0	143	1.4
HRPB, Perak	6,385	1,275	20.0	363	5.7	7,519	1,478	19.7	350	4.7
HTF, Perlis	4,160	748	18.0	843	20.3	4,436	849	19.1	875	19.7
HPP. Pulau Pinang	4,527	987	21.8	615	13.6	3,673	738	20.1	553	15.1
HWKK, Likas	15,500	3,354	21.6	1,278	8.2	15,239	2,870	18.8	918	6.0
HUS,Sarawak	11,639	1,137	9.8	40	0.3	10,656	346	3.2	8	0.1
HTAR, Selangor	12,718	2,824	22.2	716	5.6	12,889	2,653	20.6	982	7.6
HSNZ, Terengganu	14,418	1,753	12.2	1,467	10.2	15,546	1,669	10.7	1,512	9.7
HKL	11,282	2,541	22.5	1,293	11.5	9,848	1,829	18.6	1,232	12.5
Hospital Segamat	-	-	-	-	-	3,307	533	16.1	441	13.3
Total	140,162	23,305	16.6	7,823	5.6	149,746	21,790	14.6	7,935	5.3

Table 8.2: Distribution of Anaemia at Booking and Delivery by Ethnicity 2013-2015

Ethnicity	2013					2014					2015				
	Total women	Anemia			Total women	Anemia			Total women	Anemia			Total women	Booking	
		Booking		Delivery		Booking		Delivery		Booking		Delivery		Delivery	
	n	n	%	n	%	n	n	%	n	n	%	n	n	%	n
Malay	84,503	22,584	26.7	8,519	10.1	97,764	14,740	15.1	5,439	5.6	106,818	14,045	13.1	5,824	5.5
Chinese	5,829	1,706	29.3	600	10.3	7,939	1,278	16.1	247	3.1	8,786	1,269	14.4	227	2.6
Indian	5,296	2,062	38.9	743	14.0	5,892	1,702	28.9	380	6.4	6,234	1,638	26.3	481	7.7
Kadazan/ Dusun	4,253	2,290	53.8	1,327	31.2	4,227	859	20.3	298	7.0	4,565	828	18.1	292	6.4
Murut	300	165	55.0	91	30.3	290	62	21.4	30	10.3	333	67	20.1	15	4.5
Bajau	3,289	1,781	54.2	1,042	31.7	3,192	743	23.3	285	8.9	3,460	685	19.8	223	6.4
Melanau	35	8	22.9	1	2.9	51	2	3.9	18	35.3	67	5	7.5	2	3.0
Iban	1066	265	24.9	58	5.4	2208	189	8.6	12	0.5	2029	90	4.4	15	0.7
Bidayuh	773	182	23.5	22	2.8	1730	165	9.5	44	2.5	1608	59	3.7	5	0.3
OA Peninsular Malaysia	687	235	34.2	94	13.7	812	179	22.0	208	25.6	1124	288	25.6	42	3.7
OI Sabah & Sarawak	2,249	1,261	56.1	673	29.9	2,064	472	22.9	713	34.5	3,443	619	18.0	186	5.4
Others	1,849	893	48.3	504	27.3	2,037	381	18.7	23	1.1	1,161	219	18.9	95	8.2
Foreigner	10,091	3,948	39.1	1,928	19.1	11,309	2,385	21.1	126	1.1	9,051	1,784	19.7	482	5.3
NA	551	186	33.8	64	11.6	647	148	22.9	122	18.9	1067	194	18.2	46	4.3

Table 8.3: Distribution of Anaemia at Booking and Delivery by Parity 2013-2015

Parity	2013					2014					2015				
	Total women	Anemia			Total women	Anemia			Total women	Anemia			Total women	Booking	
		Booking		Delivery		Booking		Delivery		Booking		Delivery		Delivery	
	n	n	%	n	%	n	n	%	n	n	%	n	n	%	n
1	42,071	12,540	29.8	5,194	12.3	48,484	7,774	16.0	2,309	4.8	52,060	7,283	14.0	2,500	4.8
2 - 5	71,778	22,310	31.1	9,394	13.1	83,950	13,884	16.5	5,000	6.0	90,481	13,039	14.4	4,938	5.5
≥ 6	6,742	2,675	39.7	1059	15.7	7,163	1,590	22.2	510	7.1	6,242	1,332	21.3	453	7.3
NA	180	41	22.8	19	10.6	565	57	10.1	4	0.7	963	136	14.1	44	4.6

Table 8.4: Distribution of Anaemia at Booking and Delivery by Age 2013-2015

Age	2013					2014					2015				
	Total women	Anemia				Total women	Anemia				Total women	Anemia			
		Booking		Delivery			Booking		Delivery			Booking		Delivery	
	n	n	%	n	%	n	n	%	n	%	n	n	%	n	%
10-14	112	56	50.0	27	24.1	130	42	32.3	4	3.1	131	37	28.2	3	2.3
15-19	5,763	2,667	46.3	1,025	17.8	6,709	1,954	29.1	475	7.1	6,563	1,686	25.7	431	6.6
20-24	22,022	7,456	33.9	3,160	14.3	24,984	4,730	18.9	1,463	5.9	26,538	4,392	16.5	1,515	5.7
25-29	42,835	12,103	28.3	5,117	11.9	48,892	6,989	14.3	2,542	5.2	51,844	6,636	12.8	2,597	5.0
30-34	30,720	9,101	29.6	3,865	12.6	37,068	5,710	15.4	2,026	5.5	40,328	5,287	13.1	2,092	5.2
35-39	15,029	4,658	31.0	1,907	12.7	17,420	2,917	16.7	1,002	5.8	18,987	2,823	14.9	987	5.2
40-44	3,988	1,416	35.5	524	13.1	4,614	892	19.3	293	6.4	5,003	835	16.7	286	5.7
45-49	281	100	35.6	37	13.2	324	64	19.8	16	4.9	332	90	27.1	24	7.2
50-54	18	8	44.4	3	16.7	20	6	30.0	2	10.0	16	3	18.8	0	0.0
55-59	3	1	33.3	1	33.3	1	1	100.0	0	0.0	4	1	25.0	0	0.0

Table 8.5: Distribution of Anaemia at Booking and Delivery by Mode of delivery 2013-2015

Mode of Delivery	2013					2014					2015				
	Total women	Anemia				Total women	Anemia				Total women	Anemia			
		Booking		Delivery			Booking		Delivery			Booking		Delivery	
	n	n	%	n	%	n	n	%	n	%	n	n	%	n	%
Vaginal	82,641	26,513	32.1	10,661	12.9	96,149	16,227	16.9	4,850	5.0	101,393	15,030	14.8	4,671	4.6
SVD	82,267	26,397	32.1	10,615	12.9	95,652	16,136	16.9	4,825	5.0	100,973	14,957	14.8	4,653	4.6
Breech	361	112	31.0	43	11.9	462	90	19.5	25	5.4	401	73	18.2	18	4.5
NA	13	4	30.8	3	23.1	35	1	2.9	0	0.0	19	0	0.0	0	0.0
Instrumental	4,381	1,218	27.8	485	11.1	5,636	914	16.2	219	3.9	6,050	854	14.1	241	4.0
Vacuum	3,993	1,113	27.9	448	11.2	5,147	827	16.1	198	3.8	5,632	802	14.2	222	3.9
Forceps	393	105	26.7	37	9.4	497	87	17.5	21	4.2	426	54	12.7	20	4.7
Caesarean	29,848	8,432	28.2	4,258	14.3	34,829	5,662	16.3	2,639	7.6	38,552	5,595	14.5	2,879	7.5
Classical	137	35	25.5	30	21.9	189	25	13.2	22	11.6	101	18	17.8	11	10.9
Hysterotomy	30	8	26.7	3	10.0	24	4	16.7	3	12.5	21	5	23.8	3	14.3
LSCS	29,670	8,386	28.3	4,221	14.2	34,571	5,629	16.3	2,613	7.6	38,386	5,565	14.5	2,858	7.4
Others	11	3	27.3	4	36.4	45	4	8.9	1	2.2	44	7	15.9	7	15.9
NA	3901	1403	36.0	262	6.7	3548	502	14.1	115	3.2	3751	311	8.3	144	3.8

Table 8.6: Apgar Score in relation to Anaemia at Booking and Delivery 2013-2015

Apgar Score	2013					2014					2015				
	Total women	Anemia			Total women	Anemia			Total women	Anemia			Total women	Booking	
		Booking	Delivery	Booking		Booking	Delivery	Booking		Booking	Delivery	Booking		Delivery	%
Apgar 1 min	n	n	%	n	%	n	n	%	n	n	%	n	n	%	%
≤ 7	6,313	1,657	26.2	777	12.3	7,388	1,194	16.2	481	6.5	4,360	697	16.0	316	7.2
> 7	110,760	34,581	31.2	14,673	13.2	129,267	21,693	16.8	7,258	5.6	141,891	20,873	14.7	7,592	5.4
NA	5,023	1,771	35.3	413	8.2	5,002	736	14.7	210	4.2	5,017	491	9.8	180	3.6
Apgar 5 min															
≤ 7	1,200	348	29.0	156	13.0	2,003	283	14.1	113	5.6	984	167	17.0	63	6.4
> 7	115,504	35,792	31.0	15,257	13.2	134,214	22,545	16.8	7,590	5.7	144,859	21,338	14.7	7,809	5.4
NA	5,392	1,869	34.7	450	8.3	5,440	795	14.6	246	4.5	5,425	556	10.2	216	4.0

HEART DISEASE IN PREGNANCY

Table 9.1: Incidence of HDP by SDP 2013-2015

SDP	2013			2014			2015		
	Total women	Hypertensive disorder		Total women	Hypertensive disorder		Total women	Hypertensive disorder	
	n	n	%	n	n	%	n	n	%
HSA, Johor	7,799	426	5.46	10,872	415	3.82	14,443	421	2.91
HSB, Kedah	10,129	345	3.41	9,273	272	2.93	9,603	273	2.84
HRPZ II, Kelantan	11,913	325	2.73	12,298	319	2.59	11,808	207	1.75
Malacca Hospital	10,533	320	3.04	10,929	234	2.14	11,623	182	1.57
HTJ, N Sembilan	4,809	224	4.66	8,264	209	2.53	9,162	169	1.84
HTAA, Pahang	7,884	389	4.93	7,897	311	3.94	9,994	351	3.51
HRPB, Perak	4,028	266	6.60	6,385	302	4.73	7,519	265	3.52
HTF, Perlis	3,868	110	2.84	4,160	137	3.29	4,436	121	2.73
HPP, Pulau Pinang	3,672	63	1.72	4,527	61	1.35	3,673	73	1.99
HWKK, Likas, Sabah	15,220	308	2.02	15,500	453	2.92	15,239	485	3.18
HUS, Sarawak	4,481	183	4.08	11,639	458	3.94	10,656	324	3.04
HTAR, Selangor	11,986	513	4.28	12,718	438	3.44	12,889	332	2.58
HSNZ, Terengganu	13,620	666	4.89	14,418	563	3.90	15,546	543	3.49
HKL	10,829	339	3.13	11,282	232	2.06	9,848	198	2.01
Hospital Segamat	-	-	-	-	-	-	3,307	79	2.39
Total	120,771	4,477	3.71	140,162	4,404	3.14	149,746	4,023	2.69

Table 9.2: Incidence of HDP 2013-2015

Type of hypertensive disorder	2013		2014		2015	
	n	%	n	%	n	%
Pre-existing hypertension	905	20.21	854	19.14	826	18.52
Gestational hypertension	3,131	69.94	3,145	70.50	2,751	61.67
PIH without proteinuria	2,000	44.67	1,891	42.39	1,639	36.74
Pre-eclampsia	727	16.24	660	14.79	606	13.58
Eclampsia	46	1.03	54	1.21	53	1.19
Severe Pre Eclampsia	3	0.07	179	4.01	206	4.62
Chronic hypertension with superimposed pre-eclampsia	340	7.59	338	7.58	378	8.47
Unclassified	32	0.71	36	0.81	39	0.87
NA	69	1.54	88	1.97	95	2.13

Table 9.3a: HDP by Ethnicity 2013

Ethnicity	2013											
	Total Patients	Pre-existing hypertension		Gestational hypertension		Chronic hypertension with superimposed PE		Unclassified		NA		Total HDP
	n	n	%	n	%	n	%	n	%	n	%	n
Malay	84,503	685	0.81	2,445	2.89	275	0.33	23	0.03	62	0.07	3,490
Chinese	5,829	54	0.93	135	2.32	12	0.21	3	0.05	0	0.00	204
Indian	5,296	26	0.49	113	2.13	12	0.23	0	0.00	0	0.00	151
OI ,Sabah & Sarawak	12,652	96	0.76	231	1.83	21	0.17	2	0.02	2	0.02	352
Foreigner	10,091	33	0.33	163	1.62	15	0.15	3	0.03	2	0.02	216
Others	2,400	11	0.46	44	1.83	5	0.21	1	0.04	3	0.13	64

Table 9.3b: HDP by Ethnicity 2014

Ethnicity	2014											
	Total Patients	Pre-existing hypertension		Gestational hypertension		Chronic hypertension with superimposed PE		Unclassified		NA		Total HDP
	n	n	%	n	%	n	%	n	%	n	%	n
Malay	97,764	648	0.66	2,264	2.32	270	0.28	21	0.02	68	0.07	3,271
Chinese	7,939	39	0.49	166	2.09	18	0.23	2	0.03	4	0.05	229
Indian	5,892	23	0.39	76	1.29	8	0.14	0	0.00	1	0.02	108
OI Sabah & Sarawak	14,574	92	0.63	397	2.72	23	0.16	10	0.07	8	0.05	530
Foreigner	11,309	38	0.34	179	1.58	15	0.13	3	0.03	5	0.04	240
Others	2,037	13	0.64	53	2.60	3	0.15	0	0.00	0	0.00	69
NA	647	1	0.15	10	1.55	1	0.15	0	0.00	2	0.31	14

Table 9.3c: HDP by ethnicity 2015

Ethnicity	2015											
	Total Patients	Pre-existing Hypertension		Gestational Hypertension		Chronic hypertension with superimposed PE		Unclassified		NA		Total HDP
	n	n	%	n	%	n	%	n	%	n	%	n
Malay	106,818	610	0.57	1,960	1.83	310	0.29	30	0.03	67	0.06	2,977
Chinese	8,786	51	0.58	132	1.50	19	0.22	0	0.00	4	0.05	206
Indian	6,234	22	0.35	71	1.14	14	0.22	1	0.02	2	0.03	110
OI Sabah & Sarawak	15,505	108	0.70	387	2.50	23	0.15	3	0.02	12	0.08	533
Foreigner	9,051	26	0.29	129	1.43	7	0.08	3	0.03	6	0.07	171
Others	2,285	7	0.31	52	2.28	3	0.13	2	0.09	3	0.13	67
NA	1,067	2	0.19	20	1.87	2	0.19	0	0.00	1	0.09	25

Table 9.0.1: HDP in relation to Parity 2013 to 2015

Parity	2013											
	Total Patients	Pre-existing Hypertension		Gestational Hypertension		Chronic hypertension with superimposed PE		Unclassified		NA		Total HDP
	n	n	%	n	%	n	%	n	%	n	%	n
1	42,071	227	0.54	1,029	2.45	101	0.24	6	0.01	23	0.05	1,386
2-5	71,778	578	0.81	1,791	2.50	212	0.30	24	0.03	36	0.05	2,641
>5	6,742	99	1.47	308	4.57	27	0.40	2	0.03	10	0.15	446
NA	180	1	0.56	3	1.67	0	0.00	0	0.00	0	0.00	4
	2014											
1	48,484	190	0.39	1,029	2.12	94	0.19	11	0.02	26	0.05	1,350
2-5	83,950	562	0.67	1,793	2.14	214	0.25	20	0.02	59	0.07	2,648
>5	7,163	99	1.38	320	4.47	29	0.40	5	0.07	2	0.03	455
NA	565	3	0.53	3	0.53	1	0.18	0	0.00	1	0.18	8
	2015											
1	52,060	199	0.38	937	1.80	87	0.17	10	0.02	26	0.05	1,259
2-5	90,481	548	0.61	1,599	1.77	254	0.28	23	0.03	59	0.07	2,483
>5	6,242	76	1.22	205	3.28	35	0.56	6	0.10	10	0.16	332
NA	963	3	0.31	10	1.04	2	0.21	0	0.00	0	0.00	15

Table 9.5a: HDP in relation to Age 2013 -2014

Age	2013											Total HDP	
	Total Patients	Pre-existing Hypertension			Gestational Hypertension		Chronic hypertension with superimposed PE		Unclassified		NA		
		n	n	%	n	%	n	%	n	%	n	%	
10-14	112	0	0.00		0	0.00	0	0.00	0	0.00	0	0.00	0
15-19	5,763	8	0.14		50	0.87	7	0.12	2	0.03	0	0.00	67
20-24	22,022	65	0.30		304	1.38	19	0.09	1	0.00	8	0.04	397
25-29	42,835	200	0.47		833	1.94	74	0.17	7	0.02	18	0.04	1,132
30-34	30,720	242	0.79		919	2.99	96	0.31	11	0.04	16	0.05	1,284
35-39	15,029	286	1.90		714	4.75	105	0.70	6	0.04	19	0.13	1,130
40-44	3,988	97	2.43		284	7.12	37	0.93	5	0.13	6	0.15	429
45-49	281	7	2.49		27	9.61	2	0.71	0	0.00	2	0.71	38
50-54	18	0	0.00		0	0.00	0	0.00	0	0.00	0	0.00	0
55-59	3	0	0.00		0	0.00	0	0.00	0	0.00	0	0.00	0
2014													
10-14	130	0	0.00		0	0.00	0	0.00	1	0.77	0	0.00	1
15-19	6,709	14	0.21		85	1.27	3	0.04	1	0.01	1	0.01	104
20-24	24,984	40	0.16		321	1.28	26	0.10	0	0.00	4	0.02	391
25-29	48,892	173	0.35		806	1.65	62	0.13	8	0.02	19	0.04	1,068
30-34	37,068	255	0.69		920	2.48	93	0.25	13	0.04	30	0.08	1,311
35-39	17,420	247	1.42		711	4.08	108	0.62	8	0.05	18	0.10	1,092
40-44	4,614	113	2.45		267	5.79	42	0.91	4	0.09	15	0.33	441
45-49	324	12	3.70		35	10.80	4	1.23	1	0.31	0	0.00	52
50-54	20	0	0.00		0	0.00	0	0.00	0	0.00	1	5.00	1
55-59	1	0	0.00		0	0.00	0	0.00	0	0.00	0	0.00	0

Table 9. 5b: HDP in relation to Age 2015

Age	2015											Total HDP	
	Total Patients	Pre-existing Hypertension			Gestational Hypertension		Chronic hypertension with superimposed PE		Unclassified		NA		
		n	n	%	n	%	n	%	n	%	n	%	
10-14	131	0	0.00		3	2.29	0	0.00	0	0.00	0	0.00	3
15-19	6,563	9	0.14		59	0.90	3	0.05	1	0.02	2	0.03	74
20-24	26,538	52	0.20		273	1.03	15	0.06	2	0.01	8	0.03	350
25-29	51,844	183	0.35		705	1.36	73	0.14	5	0.01	14	0.03	980
30-34	40,328	243	0.60		816	2.02	113	0.28	18	0.04	29	0.07	1,219
35-39	18,987	241	1.27		628	3.31	127	0.67	5	0.03	25	0.13	1,026
40-44	5,003	89	1.78		251	5.02	42	0.84	6	0.12	17	0.34	405
45-49	332	9	2.71		15	4.52	5	1.51	2	0.60	0	0.00	31
50-54	16	0	0.00		1	6.25	0	0.00	0	0.00	0	0.00	1
55-59	4	0	0.00		0	0.00	0	0.00	0	0.00	0	0.00	0

Table 9.6: Mode of delivery among HDP in 2013 and 2015

Mode of delivery	2013											
	Total deliveries	Pre-existing Hypertension		Gestational Hypertension		Chronic hypertension with superimposed PE		Unclassified		NA		Total HDP
		n	%	n	%	n	%	n	%	n	%	
SVD	82,267	398	0.48	1,509	1.83	97	0.12	17	0.02	36	0.04	2,057
Breech	361	3	0.83	16	4.43	5	1.39	1	0.28	0	0.00	25
Vacuum	3,993	28	0.70	105	2.63	5	0.13	0	0.00	2	0.05	140
Forceps	393	3	0.76	10	2.54	1	0.25	0	0.00	0	0.00	14
CS	29,848	447	1.50	1,424	4.77	222	0.74	14	0.05	30	0.10	2,137
NA	3,901	26	0.67	67	1.72	10	0.26	0	0.00	1	0.03	104
2014												
SVD	95,652	379	0.40	1,450	1.52	115	0.12	21	0.02	42	0.04	2,007
Breech	462	2	0.43	18	3.90	5	1.08	1	0.22	0	0.00	26
Vacuum	5,147	28	0.54	92	1.79	6	0.12	0	0.00	1	0.02	127
Forceps	497	0	0.00	12	2.41	0	0.00	0	0.00	0	0.00	12
CS	34,829	416	1.19	1,510	4.34	206	0.59	12	0.03	43	0.12	2,187
NA	3,526	28	0.79	61	1.73	6	0.17	2	0.06	2	0.06	99
2015												
SVD	100,973	348	0.34	1,306	1.29	130	0.13	23	0.02	48	0.05	1,855
Breech	401	3	0.75	16	3.99	1	0.25	0	0.00	0	0.00	20
Vacuum	5,632	26	0.46	98	1.74	9	0.16	1	0.02	2	0.04	136
Forceps	426	0	0.00	9	2.11	3	0.70	0	0.00	1	0.23	13
CS	38,552	431	1.12	1,281	3.32	228	0.59	15	0.04	42	0.11	1,997
NA	3,751	18	0.48	41	1.09	7	0.19	0	0.00	2	0.05	68

Table 9.7a: HDP in relation to fetal weight in 2013

Birth weight (grams)	2013											
	Total deliveries	Pre-existing Hypertension		Gestational Hypertension		Chronic hypertension with superimposed PE		Unclassified		NA		Total HDP
		n	n	%	n	n	%	n	n	%	n	n
≤1000	1,313	28	2.13	72	5.48	30	2.28	0	0.00	3	0.23	133
1001 - 1500	1,362	23	1.69	127	9.32	20	1.47	0	0.00	1	0.07	171
1501 - 2000	3,445	75	2.18	237	6.88	57	1.65	3	0.09	1	0.03	373
2001 - 2500	14,032	137	0.98	543	3.87	80	0.57	4	0.03	15	0.11	779
2501 - 3000	42,686	304	0.71	1,026	2.40	72	0.17	14	0.03	20	0.05	1,436
3001 - 3500	41,014	231	0.56	773	1.88	58	0.14	6	0.01	20	0.05	1,088
3501 - 3999	11,630	78	0.67	239	2.06	10	0.09	5	0.04	6	0.05	338
≥4000	2,524	17	0.67	94	3.72	6	0.24	0	0.00	3	0.12	120
NA	4,090	28	0.68	71	1.74	11	0.27	0	0.00	1	0.02	111

Table 9.7b: HDP in relation to fetal weight in 2014

Birth weight (grams)	2014										Total HDP	
	Total deliveries	Pre-existing Hypertension		Gestational Hypertension		Chronic hypertension with superimposed PE		Unclassified		NA		
≤1000	1,440	17	1.18	68	4.72	28	1.94	1	0.07	1	0.07	115
1001 - 1500	1,471	24	1.63	127	8.63	34	2.31	0	0.00	9	0.61	194
1501 - 2000	3,950	51	1.29	291	7.37	37	0.94	3	0.08	6	0.15	388
2001 - 2500	16,175	128	0.79	543	3.36	54	0.33	12	0.07	10	0.06	747
2501 - 3000	50,337	277	0.55	973	1.93	96	0.19	10	0.02	32	0.06	1,388
3001 - 3500	52,408	270	0.52	927	1.77	68	0.13	10	0.02	27	0.05	1,302
3501 - 3999	13,039	65	0.50	199	1.53	17	0.13	0	0.00	5	0.04	286
≥4000	2,837	33	1.16	70	2.47	7	0.25	1	0.04	1	0.04	112
NA	0	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0

Table 9.7c: HDP in relation to fetal weight in 2015

Birth weight (grams)	2015											Total HDP
	Total deliveries	Pre-existing Hypertension		Gestational Hypertension		Chronic hypertension with superimposed PE		Unclassified		NA		
		n	n	%	n	%	n	%	n	%	n	n
≤1000	1,563	27	1.73	74	4.73	21	1.34	2	0.13	7	0.45	131
1001 - 1500	1,597	33	2.07	116	7.26	34	2.13	0	0.00	2	0.13	185
1501 - 2000	4,186	60	1.43	244	5.83	45	1.08	4	0.10	6	0.14	359
2001 - 2500	17,868	136	0.76	557	3.12	59	0.33	6	0.03	13	0.07	771
2501 - 3000	54,026	250	0.46	851	1.58	112	0.21	13	0.02	28	0.05	1,254
3001 - 3500	49,631	215	0.43	673	1.36	70	0.14	11	0.02	27	0.05	996
3501 - 3999	13,605	70	0.51	168	1.23	21	0.15	1	0.01	7	0.05	267
≥4000	2,794	17	0.61	38	1.36	7	0.25	1	0.04	2	0.07	65
NA	5,998	28	0.00	79	0.00	12	0.00	1	0.00	4	0.00	0

Table 9.8a: Apgar score and HDP in 2013 to 2014

Apgar score	2013											
	Total deliveries	Pre-existing Hypertension		Gestational Hypertension		Chronic hypertension with superimposed PE		Unclassified		NA		Total HDP
	n	n	%	n	%	n	%	n	%	n	%	n
1 min												
≤7	6,313	86	1.36	260	4.12	51	0.81	2	0.03	5	0.08	404
>7	110,760	790	0.71	2,804	2.53	273	0.25	29	0.03	63	0.06	3,959
NA	5,023	45	0.90	118	2.35	20	0.40	1	0.02	2	0.04	186
5 mins												
≤7	1,200	17	1.42	50	4.17	7	0.58	0	0.00	3	0.25	77
>7	115,504	853	0.74	2,999	2.60	310	0.27	31	0.03	65	0.06	4,258
NA	5,392	51	0.95	133	2.47	27	0.50	1	0.02	2	0.04	214
	2014											
1 min												
≤7	7,388	70	0.95	278	3.76	48	0.65	1	0.01	5	0.07	402
>7	129,267	750	0.58	2,800	2.17	268	0.21	33	0.03	83	0.06	3,934
NA	5,002	45	0.90	120	2.40	25	0.50	3	0.06	3	0.06	196
5 mins												
≤7	2,003	16	0.80	50	2.50	8	0.40	1	0.05	2	0.10	77
>7	134,214	795	0.59	3,004	2.24	302	0.23	33	0.02	85	0.06	4,219
NA	5,440	54	0.99	144	2.65	31	0.57	3	0.06	4	0.07	236

Table 9.8b: Apgar score and HDP in 2015

Apgar score	2015											
	Total deliveries	Pre-existing Hypertension		Gestational Hypertension		Chronic hypertension with superimposed PE		Unclassified		NA		Total HDP
	n	n	%	n	%	n	%	n	%	n	%	n
1 min												
≤7	4,360	46	1.06	167	3.83	32	0.73	3	0.07	2	0.05	250
>7	141,891	748	0.53	2,529	1.78	324	0.23	33	0.02	90	0.06	3,724
NA	5,017	42	0.84	104	2.07	25	0.50	3	0.06	4	0.08	178
5 mins												
≤7	984	5	0.51	36	3.66	7	0.71	0	0.00	0	0.00	48
>7	144,859	784	0.54	2,636	1.82	343	0.24	36	0.02	90	0.06	3,889
NA	5,425	47	0.87	128	2.36	31	0.57	3	0.06	6	0.11	215

Table 9.9: Fetal complications in HDP 2013-2015

Fetal outcome	2013			2014			2015		
	Total deliveries	HDP		Total deliveries	HDP		Total deliveries	HDP	
		n	%		n	%		n	%
Prematurity	14,062	1,158	8.23	16,051	1,219	7.59	4,921	576	11.70
Intrauterine growth restriction	1,020	160	15.69	1,012	125	12.35	538	69	12.83
FSB	231	17	7.36	199	16	8.04	229	14	6.11
MSB	388	28	7.22	360	40	11.11	347	31	8.93

Table 9.10: Maternal complications in HDP 2013 - 2015

Complications	2013		2014		2015	
	n	%	n	%	n	%
Abruptio placenta	20	0.45	34	0.76	29	0.71
Pulmonary embolism	0	0.00	3	0.07	1	0.02
Post-partum hemorrhage	64	1.43	57	1.28	78	1.91
DIVC	0	0.00	0	0.00	0	0.00
Pulmonary oedema	3	0.07	2	0.04	3	0.07
Maternal collapse	3	0.07	2	0.04	3	0.07

HEART DISEASE IN PREGNANCY

Table 10.1: Heart disease by SDP 2013-2015

SDP	Total deliveries			Heart disease in pregnancy					
	2013	2014	2015	2013	%	2014	%	2015	%
HSA, Johor	7,799	10,872	14,443	96	1.23	71	0.65	55	0.38
HSB, Kedah	10,129	9,273	9,603	77	0.76	64	0.69	51	0.53
HRPZ II, Kelantan	11,913	12,298	11,808	33	0.28	32	0.26	9	0.08
Malacca Hospital	10,533	10,929	11,623	34	0.32	20	0.18	20	0.17
HTJ, N Sembilan	4,809	8,264	9,162	11	0.23	14	0.17	9	0.10
HTAA, Pahang	7,884	7,897	9,994	31	0.39	22	0.28	38	0.38
HRPB, Perak	4,028	6,385	7,519	23	0.57	28	0.44	20	0.27
HTF, Perlis	3,868	4,160	4,436	29	0.75	24	0.58	17	0.38
HPP, Pulau Pinang	3,672	4,527	3,673	19	0.52	10	0.22	16	0.44
HWKK,Likas, Sabah	15,220	15,500	15,239	47	0.31	66	0.43	74	0.49
HUS, Sarawak	4,481	11,639	10,656	17	0.38	34	0.29	32	0.30
HTAR, Selangor	11,986	12,718	12,889	84	0.70	79	0.62	45	0.35
HSNZ, Terengganu	13,620	14,418	15,546	100	0.73	121	0.84	101	0.65
HKL	10,829	11,282	9,848	65	0.60	49	0.43	41	0.42
Hospital Segamat	-	-	3,307	-	-	-	-	5	0.15
Total	120,771	140,162	146,439	666	0.55	634	0.45	533	0.36

Table 10.2: Types of heart disease 2013-2015

Types of heart disease	2013		2014		2015	
	n	%	n	%	n	%
Acquired	150	22.52	113	17.82	67	10.57
Congenital	161	24.17	146	23.03	119	18.77
IHD	30	4.50	25	3.94	28	4.42
Unknown	325	48.80	350	55.21	319	50.32

Table 10.3: Heart disease by Ethnicity 2013-2015

Ethnicity	2013			2014			2015		
	Total Patients	Heart disease in pregnancy	Total Patients	Heart disease in pregnancy	Total Patients	Heart disease in pregnancy			
	n	n	%	n	n	%			
Malay	84,503	507	0.60	97,764	476	0.49	106,454	364	0.34
Chinese	5,829	36	0.62	7,939	26	0.33	8,754	32	0.37
Indian	5,296	25	0.47	5,892	26	0.44	6,219	15	0.24
Kadazan/Dusun	4,253	19	0.45	4,227	18	0.43	4,547	18	0.40
Murut	300	0	0.00	290	3	1.03	333	0	0.00
Bajau	3,289	6	0.18	3,192	17	0.53	3,439	21	0.61
Melanau	35	0	0.00	51	0	0.00	67	0	0.00
Iban	1,066	8	0.75	2,208	11	0.50	2,020	9	0.45
Bidayuh	773	2	0.26	1,730	5	0.29	1,602	6	0.37
OA Peninsular Malaysia	687	1	0.15	812	2	0.25	1,118	6	0.54
OI Sabah & Sarawak	2,249	5	0.22	2,064	11	0.53	3,415	28	0.82
Others	1,849	11	0.59	2,037	9	0.44	1,156	5	0.43
Foreigners	10,091	43	0.43	11,309	30	0.27	9,025	26	0.29
NA	551	3	0.54	647	0	0.00	1,064	3	0.28

Table 10.4: Heart disease by Age 2013 – 2015

Age	2013								
	Total Patients	Acquired		Congenital		IHD		NA	
		n	%	n	%	n	%	n	%
10-14	112	0	0.00	0	0.00	0	0.00	0	0.00
15-19	5,763	5	0.09	2	0.03	0	0.00	14	0.24
20-24	22,022	27	0.12	43	0.20	4	0.02	43	0.20
25-29	42,835	42	0.10	53	0.12	7	0.02	100	0.23
30-34	30,720	46	0.15	39	0.13	7	0.02	99	0.32
35-39	15,029	20	0.13	20	0.13	8	0.05	51	0.34
40-44	3,988	10	0.25	4	0.10	4	0.10	16	0.40
45-49	281	0	0.00	0	0.00	0	0.00	2	0.71
50-54	18	0	0.00	0	0.00	0	0.00	0	0.00
55-59	3	0	0.00	0	0.00	0	0.00	0	0.00
Age	2014								
	Total Patients	Acquired		Congenital		IHD		NA	
		n	%	n	%	n	%	n	%
10-14	130	0	0.00	0	0.00	0	0.00	0	0.00
15-19	6,709	3	0.04	3	0.04	0	0.00	16	0.24
20-24	24,984	17	0.07	28	0.11	5	0.02	48	0.19
25-29	48,892	30	0.06	64	0.13	10	0.02	111	0.23
30-34	37,068	23	0.06	33	0.09	3	0.01	104	0.28
35-39	17,420	24	0.14	14	0.08	5	0.03	46	0.26
40-44	4,614	16	0.35	4	0.09	2	0.04	22	0.48
45-49	324	0	0.00	0	0.00	0	0.00	3	0.93
50-54	20	0	0.00	0	0.00	0	0.00	0	0.00
55-59	1	0	0.00	0	0.00	0	0.00	0	0.00
Age	2015								
	Total Patients	Acquired		Congenital		IHD		NA	
		n	%	n	%	n	%	n	%
10-14	131	0	0.00	0	0.00	0	0.00	0	0.00
15-19	6,563	4	0.06	11	0.17	1	0.02	18	0.27
20-24	26,538	7	0.03	28	0.11	2	0.01	58	0.22
25-29	51,844	22	0.04	27	0.05	10	0.02	87	0.17
30-34	40,328	24	0.06	33	0.08	6	0.01	88	0.22
35-39	18,987	8	0.04	17	0.09	3	0.02	50	0.26
40-44	5,003	2	0.04	3	0.06	6	0.12	16	0.32
45-49	332	0	0.00	0	0.00	0	0.00	2	0.60
50-54	16	0	0.00	0	0.00	0	0.00	0	0.00
55-59	4	0	0.00	0	0.00	0	0.00	0	0.00

Table 10.5: Heart disease by Parity 2013 -2015

Parity	2013						
	Total Patients	Acquired		Congenital		IHD	
	n	n	%	n	%	n	%
1	42,071	39	0.09	62	0.15	12	0.03
2-5	71,778	101	0.14	94	0.13	14	0.02
≥ 6	6,742	10	0.15	5	0.07	4	0.06
Parity	2014						
	Total Patients	Acquired		Congenital		IHD	
	n	n	%	n	%	n	%
1	48,484	25	0.05	64	0.13	9	0.02
2-5	83,950	74	0.09	77	0.09	14	0.02
≥ 6	7,163	14	0.20	5	0.07	2	0.03
Parity	2015						
	Total Patients	Acquired		Congenital		IHD	
	n	n	%	n	%	n	%
1	52,060	22	0.04	55	0.11	7	0.01
2-5	90,481	42	0.05	60	0.07	19	0.02
≥ 6	6,242	3	0.05	4	0.06	2	0.03

Table 10.6: Mode of delivery in heart disease 2013-2015

Mode of delivery	2013						
	Total Patients	Acquired		Congenital		IHD	
		n	%	n	%	n	%
Vaginal	82,641	81	0.10	90	0.11	9	0.01
Instrumental	4,381	19	0.43	12	0.27	3	0.07
Caesarean	29,848	45	0.15	58	0.19	17	0.06
NA	3,901	5	0.13	1	0.03	1	0.03
Mode of delivery	2014						
	Total Patients	Acquired		Congenital		IHD	
		n	%	n	%	n	%
Vaginal	96,149	64	0.07	74	0.08	15	0.02
Instrumental	5,636	2	0.04	10	0.18	1	0.02
Caesarean	34,829	46	0.13	60	0.17	8	0.02
NA	3,548	1	0.03	2	0.06	1	0.03
Mode of delivery	2015						
	Total Patients	Acquired		Congenital		IHD	
		n	%	n	%	n	%
Vaginal	101,393	42	0.04	55	0.05	20	0.02
Instrumental	6,050	4	0.07	12	0.20	0	0.00
Caesarean	38,552	20	0.05	50	0.13	8	0.02
NA	3,751	1	0.03	2	0.05	0	0.00

Table 10.7: Severity of heart disease 2013-2015

Heart disease	2013									
	NYHA I		NYHA II		NYHA III		NYHA IV		NA	
	n	%	n	%	n	%	n	%	n	%
Acquired	99	66.00	22	14.67	0	0.00	0	0.00	29	19.33
Congenital	93	57.76	13	8.07	4	2.48	2	1.24	49	30.43
IHD	10	33.33	5	16.67	2	6.67	1	3.33	12	40.00
NA	134	41.23	25	7.69	2	0.62	0	0.00	164	50.46
Heart disease	2014									
	NYHA I		NYHA II		NYHA III		NYHA IV		NA	
	n	%	n	%	n	%	n	%	n	%
Acquired	71	62.83	9	7.96	3	2.65	1	0.88	29	25.66
Congenital	72	49.32	11	7.53	2	1.37	0	0.00	61	41.78
IHD	13	52.00	1	4.00	2	8.00	0	0.00	9	36.00
NA	157	44.86	17	4.86	1	0.29	1	0.29	174	49.71
Heart disease	2015									
	NYHA I		NYHA II		NYHA III		NYHA IV		NA	
	n	%	n	%	n	%	n	%	n	%
Acquired	39	58.21	10	14.93	0	0.00	0	0.00	18	26.87
Congenital	62	52.10	7	5.88	3	2.52	0	0.00	47	39.50
IHD	19	67.86	3	10.71	0	0.00	0	0.00	6	21.43
NA	140	43.89	15	4.70	2	0.63	0	0.00	162	50.78

Table 10.8a: Maternal and fetal complications in heart disease in pregnancy 2013

Complications	2013							
	Total deliveries	Acquired		Congenital		IHD		
		n	n	%	n	%	n	%
None	113,762	134	134	0.12	146	0.13	26	0.02
Anaesthetic complication	8	1	1	12.50	0	0.00	0	0.00
Failed instrumentation	94	0	0	0.00	0	0.00	0	0.00
Preterm labour	2,662	4	4	0.15	5	0.19	1	0.04
PPH<1500mls	644	2	2	0.31	4	0.62	0	0.00
Pulmonary embolism	4	0	0	0.00	0	0.00	1	25.00
Shock –cardiogenic	2	0	0	0.00	0	0.00	0	0.00
Thromboembolism	0	0	0	0.00	0	0.00	0	0.00
Uterine atony	596	1	1	0.17	5	0.84	0	0.00

Table 10.8b: Maternal and fetal complications in heart disease in pregnancy 2014

Complications	2014						
	Total deliveries	Acquired		Congenital		IHD	
	n	n	%	n	%	n	%
None	131,501	72	0.05	123	0.09	23	0.02
Anaesthetic complication	7	0	0.00	0	0.00	0	0.00
Failed instrumentation	117	0	0.00	0	0.00	0	0.00
Preterm labour	3,303	13	0.39	6	0.18	1	0.03
PPH<1500mls	511	1	0.20	4	0.78	1	0.20
Pulmonary embolism	10	0	0.00	0	0.00	0	0.00
Shock –cardiogenic	1	0	0.00	0	0.00	0	0.00
Thromboembolism	0	0	0.00	0	0.00	0	0.00
Uterine atony	538	2	0.37	4	0.74	1	0.19

Table 10.8c: Maternal and fetal complications in heart disease in pregnancy 2015

Complications	2015						
	Total deliveries	Acquired		Congenital		IHD	
	n	n	%	n	%	n	%
None	143,540	47	0.03	104	0.07	26	0.02
Anaesthetic complication	14	0	0.00	0	0.00	0	0.00
Failed instrumentation	86	0	0.00	0	0.00	0	0.00
Preterm labour	2,969	67	2.26	119	4.01	28	0.94
PPH<1500mls	824	1	0.12	2	0.24	0	0.00
Pulmonary embolism	4	0	0.00	1	25.00	0	0.00
Shock –cardiogenic	1	0	0.00	1	100.00	0	0.00
Thromboembolism	0	0	0.00	0	0.00	0	0.00
Uterine atony	833	2	0.24	1	0.12	0	0.00

SEXUALLY TRANSMITTED DISEASE IN PREGNANCY

Table 11.1: Incidence of HIV in pregnancy by SDP 2013-2015

SDP	2013			2014			2015		
	Total Patients	HIV in pregnancy		Total Patients	HIV in pregnancy		Total Patients	HIV in pregnancy	
		n	n		n	n		n	%
HSA, Johor	7,799	34	0.44	10,872	12	0.11	14,443	18	0.12
HSB, Kedah	10,129	29	0.29	9,273	10	0.11	9,603	4	0.04
HRPZ II, Kelantan	11,913	6	0.05	12,298	10	0.08	11,808	6	0.05
Malacca Hospital	10,533	16	0.15	10,929	11	0.10	11,623	9	0.08
HTJ, N Sembilan	4,809	2	0.04	8,264	6	0.07	9,162	4	0.04
HTAA, Pahang	7,884	18	0.23	7,897	8	0.10	9,994	12	0.12
HRPB, Perak	4,028	13	0.32	6,385	12	0.19	7,519	18	0.24
HTF, Perlis	3,868	5	0.13	4,160	7	0.17	4,436	1	0.02
HPP, Pulau Pinang	3,672	7	0.19	4,527	6	0.13	3,673	8	0.22
HWKK, Likas, Sabah	15,220	35	0.23	15,500	20	0.13	15,239	5	0.03
HUS, Sarawak	4,481	9	0.20	11,639	10	0.09	10,656	6	0.06
HTAR, Selangor	11,986	20	0.17	12,718	10	0.08	12,889	10	0.08
HSNZ, Terengganu	13,620	42	0.31	14,418	16	0.11	15,546	15	0.10
HKL	10,829	16	0.15	11,282	7	0.06	9,848	4	0.04
Hospital Segamat	-	-	-	-	-	-	3,307	0	0.00
Total	120,771	252	0.21	140,162	145	0.10	149,746	120	0.08

Table 11.2: Incidence of Syphilis in pregnancy by SDP 2013-2015

SDP	2013			2014			2015		
	Total Patients	Syphilis in pregnancy		Total Patients	Syphilis in pregnancy		Total Patients	Syphilis in pregnancy	
		n	n		n	n		n	%
HSA, Johor	7,799	11	0.14	10,872	12	0.11	14,443	27	0.19
HSB, Kedah	10,129	18	0.18	9,273	28	0.30	9,603	44	0.46
HRPZ II, Kelantan	11,913	1	0.01	12,298	11	0.09	11,808	30	0.25
Malacca Hospital	10,533	26	0.25	10,929	25	0.23	11,623	27	0.23
HTJ, N Sembilan	4,809	3	0.06	8,264	4	0.05	9,162	9	0.10
HTAA, Pahang	7,884	16	0.20	7,897	13	0.16	9,994	11	0.11
HRPB, Perak	4,028	3	0.07	6,385	10	0.16	7,519	14	0.19
HTF, Perlis	3,868	8	0.21	4,160	19	0.46	4,436	6	0.14
HPP, Pulau Pinang	3,672	5	0.14	4,527	10	0.22	3,673	3	0.08
HWKK, Likas, Sabah	15,220	44	0.29	15,500	170	1.10	15,239	49	0.32
HUS, Sarawak	4,481	14	0.31	11,639	13	0.11	10,656	11	0.10
HTAR, Selangor	11,986	20	0.17	12,718	26	0.20	12,889	25	0.19
HSNZ, Terengganu	13,620	29	0.21	14,418	32	0.22	15,546	44	0.28
HKL	10,829	20	0.18	11,282	22	0.20	9,848	12	0.12
Hospital Segamat	-	-	-	-	-	-	3,307	3	0.09
Total	120,771	218	0.18	140,162	395	0.28	149,746	315	0.21

Table 11.3: HIV in pregnancy by Ethnicity 2013-2015

Ethnicity	2013			2014			2015		
	Total Patients	HIV in pregnancy		Total Patients	HIV in pregnancy		Total Patients	HIV in pregnancy	
	n	n	%	n	n	%	n	n	%
Malay	84,503	163	0.19	97,764	93	0.10	106,818	78	0.07
Chinese	5,829	12	0.21	7,939	7	0.09	8,786	9	0.10
Indian	5,296	16	0.30	5,892	8	0.14	6,234	4	0.06
Kadazan/Dusun	4,253	9	0.21	4,227	7	0.17	4,565	2	0.04
Murut	300	2	0.67	290	2	0.69	333	0	0.00
Bajau	3,289	6	0.18	3,192	3	0.09	3,460	2	0.06
Melanau	35	0	0.00	51	0	0.00	67	0	0.00
Iban	1,066	1	0.09	2,208	2	0.09	2,029	1	0.05
Bidayuh	773	1	0.13	1,730	2	0.12	1,608	0	0.00
OA Peninsular Malaysia	687	1	0.15	812	0	0.00	1,124	1	0.09
OI Sabah & Sarawak	2,249	5	0.22	2,064	2	0.10	3,443	1	0.03
Foreigners	10,091	28	0.28	11,309	14	0.12	9,051	19	0.21
Others	1,849	4	0.22	2,037	3	0.15	1,161	1	0.09
NA	551	4	0.73	647	2	0.31	1,067	2	0.19

Table 11.4: Syphilis in pregnancy by Ethnicity 2013-2015

Ethnicity	2013			2014			2015		
	Total Patients	Syphilis in pregnancy		Total Patients	Syphilis in pregnancy		Total Patients	Syphilis in pregnancy	
		n	n		n	n		n	n
Malay	84,503	133	0.16	97,764	176	0.18	106,818	211	0.20
Chinese	5,829	8	0.14	7,939	11	0.14	8,786	15	0.17
Indian	5,296	12	0.23	5,892	19	0.32	6,234	13	0.21
Kadazan/Dusun	4,253	6	0.14	4,227	39	0.92	4,565	12	0.26
Murut	300	1	0.33	290	2	0.69	333	1	0.30
Bajau	3,289	4	0.12	3,192	31	0.97	3,460	10	0.29
Melanau	35	0	0.00	51	0	0.00	67	0	0.00
Iban	1,066	3	0.28	2,208	5	0.23	2,029	2	0.10
Bidayuh	773	0	0.00	1,730	2	0.12	1,608	2	0.12
OA Peninsular Malaysia	687	3	0.44	812	3	0.37	1,124	5	0.44
OI Sabah&Sarawak	2,249	4	0.18	2,064	11	0.53	3,443	9	0.26
Foreigner	10,091	40	0.40	11,309	73	0.65	9,051	27	0.30
Others	1,849	3	0.16	2,037	21	1.03	1,161	5	0.43
NA	551	1	0.18	647	2	0.31	1,067	3	0.28

Table 11.5: HIV in pregnancy by Age 2013-2015

Age	2013			2014			2015		
	Total Patients	HIV in pregnancy		Total Patients	HIV in pregnancy		Total Patients	HIV in pregnancy	
	n	n	%	n	n	%	n	n	%
10-14	112	0	0.00	130	0	0.00	131	0	0.00
15-19	5,763	13	0.23	6,709	11	0.16	6,563	2	0.03
20-24	22,022	62	0.28	24,984	24	0.10	26,538	22	0.08
25-29	42,835	95	0.22	48,892	47	0.10	51,844	32	0.06
30-34	30,719	48	0.16	37,068	46	0.12	40,328	35	0.09
35-39	15,029	25	0.17	17,420	12	0.07	18,987	22	0.12
40-44	3,988	8	0.20	4,614	5	0.11	5,003	7	0.14
45-49	281	0	0.00	324	0	0.00	332	0	0.00
50-54	18	1	5.56	20	0	0.00	16	0	0.00
≥55	3	0	0.00	1	0	0.00	4	0	0.00

Table 11.6: Syphilis in pregnancy by Age 2013-2015

Age	2013			2014			2015		
	Total Patients	Syphilis in pregnancy		Total Patients	Syphilis in pregnancy		Total Patients	Syphilis in pregnancy	
	n	n	%	n	n	%	n	n	%
10-14	112	0	0.00	130	1	0.77	131	0	0.00
15-19	5,763	16	0.28	6,709	25	0.37	6,563	21	0.32
20-24	22,022	39	0.18	24,984	90	0.36	26,538	56	0.21
25-29	42,835	83	0.19	48,892	120	0.25	51,844	79	0.15
30-34	30,719	49	0.16	37,068	95	0.26	40,328	95	0.24
35-39	15,029	25	0.17	17,420	42	0.24	18,987	55	0.29
40-44	3,988	6	0.15	4,614	20	0.43	5,003	9	0.18
45-49	281	0	0.00	324	2	0.62	332	0	0.00
50-54	18	0	0.00	20	0	0.00	16	0	0.00
≥55	3	0	0.00	1	0	0.00	4	0	0.00

Table 11.7: HIV and Syphilis in pregnancy by Parity 2013-2015

HIV									
Parity	2013			2014			2015		
	Total Patients	HIV in pregnancy		Total Patients	HIV in pregnancy		Total Patients	HIV in pregnancy	
	n	n	%	n	n	%	n	n	5
1	42,071	89	0.21	48,484	49	0.10	52,060	33	0.06
2-5	71,778	148	0.21	83,950	90	0.11	90,481	85	0.09
≥6	5,840	12	0.21	6,172	4	0.06	6,242	1	0.02
NA	1,082	3	0.28	1,556	2	0.13	963	1	0.10

Syphilis									
Parity	2013			2014			2015		
	Total Patients	Syphilis in pregnancy		Total Patients	Syphilis in pregnancy		Total Patients	Syphilis in pregnancy	
	n	n	%	n	n	%	n	n	%
1	42,071	67	0.16	48,484	153	0.32	52,060	116	0.22
2-5	71,778	141	0.20	83,950	217	0.26	90,481	178	0.20
≥6	5,840	8	0.14	6,172	25	0.41	6,242	18	0.29
NA	1,082	2	0.18	1,556	0	0.00	963	3	0.31

Table 11.8: HIV and Syphilis in pregnancy by Mode of delivery 2013-2015

HIV									
Mode of Delivery	2013			2014			2015		
	Total Patients	HIV in pregnancy		Total Patients	HIV in pregnancy		Total Patients	HIV in pregnancy	
	n	n	%	n	n	%	n	n	%
Vaginal	82,641	122	0.15	96,149	56	0.06	101,393	41	0.04
Instrumental	4,381	3	0.07	5,636	1	0.02	6,050	1	0.02
Caesarean	29,848	123	0.41	34,829	83	0.24	38,552	77	0.20
NA	3,901	4	0.10	3,548	5	0.14	3,751	1	0.03

Syphilis									
Mode of Delivery	2013			2014			2015		
	Total Patients	Syphilis in pregnancy		Total Patients	Syphilis in pregnancy		Total Patients	Syphilis in pregnancy	
	n	n	%	n	n	%	n	n	%
Vaginal	82,641	157	0.19	96,149	256	0.27	101,393	215	0.21
Instrumental	4,381	9	0.21	5,636	10	0.18	6,050	12	0.20
Caesarean	29,848	45	0.15	34,829	117	0.34	38,552	85	0.22
NA	3,901	7	0.18	3,548	12	0.34	3,751	3	0.08

Table 11.9: HIV and Syphilis in pregnancy by Complications 2013-2015

HIV									
Complications	2013			2014			2015		
	Total Patients	HIV in pregnancy		Total Patients	HIV in pregnancy		Total Patients	HIV in pregnancy	
	n	n	%	n	n	%	n	n	%
Fetal distress	13,279	21	0.16	16,077	3	0.02	18,699	4	0.02
Prolonged labour	548	0	0.00	773	1	0.13	433	1	0.23
Abruption placenta	239	0	0.00	295	0	0.00	299	0	0.00
Preterm labour	2,662	6	0.23	3,303	4	0.12	2,969	6	0.20
PPH	835	2	0.24	672	0	0.00	960	0	0.00
Genital tract trauma	33,460	42	0.13	38,877	18	0.05	189	0	0.00
Syphilis									
Complications	Total Patients	Syphilis in pregnancy		Total Patients	Syphilis in pregnancy		Total Patients	Syphilis in pregnancy	
	n	n	%	n	n	%	n	n	%
	13,279	24	0.18	16,077	83	0.52	18,699	37	0.20
Fetal distress	548	0	0.00	773	0	0.00	433	1	0.23
Prolonged labour	239	0	0.00	295	0	0.00	299	0	0.00
Abruption placenta	2,662	3	0.11	3,303	4	0.12	2,969	8	0.27
Preterm labour	835	0	0.00	672	0	0.00	960	2	0.21
PPH	33,460	57	0.17	38,877	65	0.17	189	0	0.00

MEDICAL DISORDER
IN
PREGNANCY

Table 12.1a: Medical disorders in pregnancy by SDP 2013

SDP	2013															
	Total No of delivered		Thyroid disease		Bronchial asthma		Hematological disorder				Renal disease		Mental disorder		Others	
							Thalassemia		ITP							
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
HSA, Johor	7,799	6.46	41	0.53	260	3.33	36	0.46	5	0.06	3	0.04	8	0.10	174	2.23
HSB, Kedah	10,129	8.39	28	0.28	153	1.51	52	0.51	1	0.01	3	0.03	1	0.01	48	0.47
HRPZ II, Kelantan	11,913	9.86	17	0.14	71	0.60	18	0.15	0	0.00	2	0.02	2	0.02	44	0.37
Malacca Hospital	10,533	8.72	40	0.38	102	0.97	51	0.48	2	0.02	2	0.02	2	0.02	78	0.74
HTJ, Negeri Sembilan	4,809	3.98	11	0.23	85	1.77	19	0.40	1	0.02	1	0.02	4	0.08	78	1.62
HTAA, Pahang	7,884	6.53	25	0.32	107	1.36	33	0.42	2	0.03	2	0.03	2	0.03	172	2.18
HRPB, Perak	4,028	3.34	10	0.25	45	1.12	16	0.40	0	0.00	2	0.05	0	0.00	51	1.27
HTF, Perlis	3,868	3.20	14	0.36	114	2.95	36	0.93	1	0.03	3	0.08	6	0.16	125	3.23
HPP, Pulau Pinang	3,672	3.04	12	0.33	42	1.14	19	0.52	3	0.08	1	0.03	2	0.05	52	1.42
Hospital Likas, Sabah	15,220	12.60	26	0.17	63	0.41	48	0.32	2	0.01	4	0.03	2	0.01	61	0.40
Hospital Umum Sarawak	4,481	3.71	8	0.18	88	1.96	12	0.27	1	0.02	2	0.04	4	0.09	62	1.38
HTAR, Selangor	11,986	9.92	31	0.26	220	1.84	45	0.38	4	0.03	1	0.01	7	0.06	377	3.15
HSNZ, Terengganu	13,620	11.28	51	0.37	283	2.08	103	0.76	3	0.02	4	0.03	8	0.06	481	3.53
HKL	10,829	8.97	31	0.29	221	2.04	43	0.40	3	0.03	9	0.08	6	0.06	264	2.44
Total	120,771	100.00	345	0.29	1,854	1.54	531	0.44	28	0.02	39	0.03	54	0.04	2,067	1.71

Table 12.1b: Medical disorders in pregnancy by SDP 2014

SDP	2014															
	Total Patients		Thyroid disease		Bronchial Asthma		Hematological disorder				Renal disease		Mental disorder		Others	
							Thalassemia		ITP							
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
HSA, Johor	10,872	7.76	46	0.42	330	3.04	77	0.71	2	0.02	2	0.02	4	0.04	111	1.02
HSB, Kedah	9,273	6.62	22	0.24	121	1.30	29	0.31	0	0.00	3	0.03	3	0.03	39	0.42
HRPZ II, Kelantan	12,298	8.77	15	0.12	42	0.34	13	0.11	1	0.01	3	0.02	1	0.01	20	0.16
Malacca Hospital	10,929	7.80	20	0.18	98	0.90	31	0.28	2	0.02	2	0.02	3	0.03	40	0.37
HTJ, N Sembilan	8,264	5.90	9	0.11	76	0.92	18	0.22	0	0.00	0	0.00	1	0.01	40	0.48
HTAA, Pahang	7,897	5.63	24	0.30	113	1.43	24	0.30	0	0.00	4	0.05	1	0.01	106	1.34
HRPB, Perak	6,385	4.56	17	0.27	61	0.96	30	0.47	5	0.08	1	0.02	1	0.02	76	1.19
HTF, Perlis	4,160	2.97	20	0.48	134	3.22	54	1.30	1	0.02	3	0.07	4	0.10	138	3.32
HPP, Pulau Pinang	4,527	3.23	5	0.11	67	1.48	27	0.60	0	0.00	0	0.00	1	0.02	49	1.08
HWKK, Likas, Sabah	15,500	11.06	20	0.13	121	0.78	68	0.44	1	0.01	0	0.00	6	0.04	76	0.49
HUS, Sarawak	11,639	8.30	44	0.38	244	2.10	26	0.22	1	0.01	9	0.08	5	0.04	104	0.89
HTAR, Selangor	12,718	9.07	30	0.24	190	1.49	25	0.20	2	0.02	3	0.02	2	0.02	226	1.78
HSNZ, Terengganu	14,418	10.29	75	0.52	379	2.63	105	0.73	0	0.00	9	0.06	12	0.08	826	5.73
HKL	11,282	8.05	40	0.35	241	2.14	46	0.41	0	0.00	3	0.03	5	0.04	125	1.11
Total	140,162	100.00	387	0.28	2,217	1.58	573	0.41	15	0.01	42	0.03	49	0.03	1,976	1.41

Table 12.1c: Medical disorders in pregnancy by SDP 2015

SDP	2015															
	Total Patients		Thyroid disease		Bronchial Asthma		Hematological disorder				Renal disease		Mental disorder		Others	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
HSA, Johor	14,443	9.64	20	0.14	246	1.70	48	0.33	4	0.03	4	0.03	2	0.01	107	0.74
HSB, Kedah	9,603	6.41	17	0.18	122	1.27	18	0.19	0	0.00	1	0.01	3	0.03	32	0.33
HRPZ II, Kelantan	11,808	7.89	4	0.03	27	0.23	4	0.03	0	0.00	1	0.01	3	0.03	11	0.09
Malacca Hospital	11,623	7.76	23	0.20	79	0.68	19	0.16	0	0.00	4	0.03	3	0.03	30	0.26
HTJ, N Sembilan	9,162	6.12	5	0.05	13	0.14	7	0.08	0	0.00	0	0.00	0	0.00	8	0.09
HTAA, Pahang	9,994	6.67	18	0.18	90	0.90	26	0.26	0	0.00	5	0.05	0	0.00	93	0.93
HRPB, Perak	7,519	5.02	10	0.13	53	0.70	34	0.45	1	0.01	1	0.01	1	0.01	18	0.24
HTF, Perlis	4,436	2.96	20	0.45	115	2.59	44	0.99	0	0.00	2	0.05	8	0.18	74	1.67
HPP, Pulau Pinang	3,673	2.45	11	0.30	64	1.74	24	0.65	4	0.11	1	0.03	2	0.05	45	1.23
HWKK, Likas, Sabah	15,239	10.18	22	0.14	148	0.97	68	0.45	7	0.05	5	0.03	3	0.02	69	0.45
HUS, Sarawak	10,656	7.12	43	0.40	263	2.47	42	0.39	0	0.00	27	0.25	3	0.03	130	1.22
HTAR, Selangor	12,889	8.61	25	0.19	155	1.20	28	0.22	2	0.02	6	0.05	6	0.05	92	0.71
HSNZ, Terengganu	15,546	10.38	59	0.38	347	2.23	160	1.03	1	0.01	9	0.06	9	0.06	509	3.27
HKL	9,848	6.58	32	0.32	182	1.85	50	0.51	0	0.00	0	0.00	1	0.01	93	0.94
Hospital Segamat	3,307	2.21	7	0.21	35	1.06	5	0.15	0	0.00	0	0.00	1	0.03	4	0.12
Total	149,746	100.00	316	0.21	1,939	1.29	577	0.39	19	0.01	66	0.04	45	0.03	1,315	0.88

Table 12.2a: Medical disorders in pregnancy by Ethnicity 2013

Ethnicity	2013															
	Total Patients		Thyroid disease		Bronchial asthma		Hematological disorder				Renal disease		Mental disorder		Others	
							n	%	n	%						
Malay	84,503	69.97	264	0.31	1,487	1.76	406	0.48	18	0.02	28	0.03	36	0.04	1,533	1.81
Chinese	5,829	4.83	30	0.51	76	1.30	53	0.91	3	0.05	3	0.05	5	0.09	124	2.13
Indian	5,296	4.39	11	0.21	138	2.61	8	0.15	3	0.06	2	0.04	6	0.11	164	3.10
Kadazan/Dusun	4,253	3.52	7	0.16	14	0.33	26	0.61	1	0.02	0	0.00	2	0.05	23	0.54
Murut	300	0.25	1	0.33	2	0.67	5	1.67	0	0.00	0	0.00	0	0.00	1	0.33
Bajau	3,289	2.72	4	0.12	17	0.52	9	0.27	0	0.00	1	0.03	0	0.00	21	0.64
Melanau	35	0.03	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	2.86
Iban	1,066	0.88	0	0.00	18	1.69	0	0.00	0	0.00	2	0.19	2	0.19	13	1.22
Bidayuh	773	0.64	2	0.26	10	1.29	0	0.00	0	0.00	0	0.00	0	0.00	10	1.29
OA Peninsular Malaysia	687	0.57	1	0.15	4	0.58	2	0.29	0	0.00	0	0.00	0	0.00	12	1.75
OI Sabah & Sarawak	2,249	1.86	3	0.13	16	0.71	8	0.36	0	0.00	0	0.00	0	0.00	10	0.44
Foreigners	10,091	8.36	17	0.17	51	0.51	10	0.10	3	0.03	1	0.01	3	0.03	134	1.33
Others	1,849	1.53	4	0.22	15	0.81	3	0.16	0	0.00	2	0.11	0	0.00	13	0.70
NA	551	0.46	1	0.18	6	1.09	1	0.18	0	0.00	0	0.00	0	0.00	8	1.45

Table 12.2b Medical disorders in pregnancy by Ethnicity 2014

Ethnicity	2014															
	Total Patients		Thyroid disease		Bronchial Asthma		Hematological disorder				Renal disease		Mental disorder		Others	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Malay	97,764	69.75	293	0.30	1,774	1.81	421	0.43	10	0.01	33	0.03	36	0.04	1,585	1.62
Chinese	7,939	5.66	31	0.39	86	1.08	65	0.82	3	0.04	1	0.01	6	0.08	106	1.34
Indian	5,892	4.20	17	0.29	127	2.16	4	0.07	1	0.02	0	0.00	0	0.00	86	1.46
Kadazan/ Dusun	4,227	3.02	7	0.17	28	0.66	35	0.83	0	0.00	0	0.00	3	0.07	33	0.78
Murut	290	0.21	1	0.34	3	1.03	2	0.69	0	0.00	0	0.00	0	0.00	5	1.72
Bajau	3,192	2.28	4	0.13	31	0.97	14	0.44	0	0.00	0	0.00	1	0.03	8	0.25
Melanau	51	0.04	0	0.00	1	1.96	0	0.00	0	0.00	0	0.00	0	0.00	1	1.96
Iban	2,208	1.58	10	0.45	45	2.04	1	0.05	0	0.00	3	0.14	1	0.05	18	0.82
Bidayuh	1,730	1.23	3	0.17	15	0.87	2	0.12	1	0.06	2	0.12	0	0.00	16	0.92
OA Peninsular Malaysia	812	0.58	2	0.25	4	0.49	1	0.12	0	0.00	0	0.00	0	0.00	11	1.35
OI Sabah & Sarawak	2,064	1.47	3	0.15	18	0.87	8	0.39	0	0.00	0	0.00	0	0.00	6	0.29
Foreigners	11,309	8.07	11	0.10	55	0.49	13	0.11	0	0.00	2	0.02	2	0.02	87	0.77
Others	2,037	1.45	4	0.20	28	1.37	7	0.34	0	0.00	1	0.05	0	0.00	12	0.59
NA	647	0.46	1	0.15	2	0.31	0	0.00	0	0.00	0	0.00	0	0.00	2	0.31

Table 12.0.2: Medical disorders in pregnancy by Ethnicity 2015

Ethnicity	2015															
	Total Patients		Thyroid disease		Bronchial asthma		Hematological disorder				Renal disease		Mental disorder		Others	
							Thalassemia		ITP							
n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	
Malay	106,818	71.33	235	0.22	1,506	1.41	425	0.40	7	0.01	46	0.04	36	0.03	1,002	0.94
Chinese	8,786	5.87	24	0.27	86	0.98	59	0.67	2	0.02	5	0.06	5	0.06	105	1.20
Indian	6,234	4.16	13	0.21	98	1.57	9	0.14	2	0.03	2	0.03	1	0.02	35	0.56
Kadazan/ Dusun	4,565	3.05	6	0.13	36	0.79	35	0.77	2	0.04	0	0.00	1	0.02	23	0.50
Murut	333	0.22	0	0.00	3	0.90	5	1.50	0	0.00	0	0.00	0	0.00	1	0.30
Bajau	3,460	2.31	7	0.20	34	0.98	10	0.29	2	0.06	0	0.00	0	0.00	17	0.49
Melanau	67	0.04	0	0.00	1	1.49	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Iban	2,029	1.35	5	0.25	44	2.17	1	0.05	0	0.00	3	0.15	0	0.00	19	0.94
Bidayuh	1,608	1.07	6	0.37	26	1.62	2	0.12	0	0.00	5	0.31	1	0.06	15	0.93
OA Peninsular Malaysia	1,124	0.75	0	0.00	0	0.00	3	0.27	0	0.00	0	0.00	1	0.09	9	0.80
OI Sabah & Sarawak	3,443	2.30	5	0.15	41	1.19	15	0.44	3	0.09	4	0.12	0	0.00	13	0.38
Foreigners	9,051	6.04	13	0.14	39	0.43	7	0.08	1	0.01	1	0.01	0	0.00	65	0.72
Others	1,161	0.78	1	0.09	12	1.03	1	0.09	0	0.00	0	0.00	0	0.00	7	0.60
NA	1,067	0.71	1	0.09	13	1.22	5	0.47	0	0.00	0	0.00	0	0.00	4	0.37

Table 12.3a: Medical disorders in pregnancy by Age 2013 – 2014

Age	2013															
	Total Patients		Thyroid disease		Bronchial Asthma		Hematological disorder				Renal disease		Mental disorder		Others	
							Thalassemia		ITP							
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
10-14	112	0.09	0	0.00	1	0.89	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
15-19	5,763	4.77	1	0.02	68	1.18	15	0.26	0	0.00	2	0.03	0	0.00	92	1.60
20-24	22,022	18.23	37	0.17	325	1.48	86	0.39	2	0.01	7	0.03	4	0.02	368	1.67
25-29	42,835	35.47	102	0.24	636	1.48	210	0.49	11	0.03	16	0.04	11	0.03	681	1.59
30-34	30,720	25.44	120	0.39	479	1.56	145	0.47	9	0.03	10	0.03	18	0.06	581	1.89
35-39	15,029	12.44	67	0.45	264	1.76	66	0.44	5	0.03	3	0.02	17	0.11	278	1.85
40-44	3,988	3.30	18	0.45	78	1.96	9	0.23	1	0.03	1	0.03	4	0.10	62	1.55
45-49	281	0.23	0	0.00	3	1.07	0	0.00	0	0.00	0	0.00	0	0.00	5	1.78
50-54	18	0.01	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
55-59	3	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	2014															
10-14	130	0.09	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	3	2.31
15-19	6,709	4.79	1	0.01	94	1.40	23	0.34	0	0.00	3	0.04	2	0.03	81	1.21
20-24	24,984	17.83	41	0.16	425	1.70	103	0.41	1	0.00	8	0.03	7	0.03	325	1.30
25-29	48,892	34.88	124	0.25	735	1.50	204	0.42	8	0.02	14	0.03	11	0.02	678	1.39
30-34	37,068	26.45	115	0.31	589	1.59	159	0.43	4	0.01	8	0.02	9	0.02	538	1.45
35-39	17,420	12.43	80	0.46	302	1.73	72	0.41	2	0.01	7	0.04	13	0.07	260	1.49
40-44	4,614	3.29	24	0.52	69	1.50	11	0.24	0	0.00	2	0.04	7	0.15	85	1.84
45-49	324	0.23	2	0.62	2	0.62	1	0.31	0	0.00	0	0.00	0	0.00	5	1.54
50-54	20	0.01	0	0.00	1	5.00	0	0.00	0	0.00	0	0.00	0	0.00	1	5.00
55-59	1	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00

Table 12.3b: Medical disorders in pregnancy by Age 2015

Age	2015															
	Total Patients		Thyroid disease		Bronchial Asthma		Hematological disorder				Renal disease		Mental disorder		Others	
							Thalassemia		ITP							
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
10-14	131	0.09	0	0.00	4	3.05	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
15-19	6,563	4.38	5	0.08	114	1.74	14	0.21	0	0.00	1	0.02	1	0.02	51	0.78
20-24	26,538	17.72	23	0.09	324	1.22	124	0.47	3	0.01	10	0.04	4	0.02	207	0.78
25-29	51,844	34.62	112	0.22	648	1.25	212	0.41	8	0.02	19	0.04	13	0.03	492	0.95
30-34	40,328	26.93	96	0.24	528	1.31	162	0.40	5	0.01	17	0.04	14	0.03	362	0.90
35-39	18,987	12.68	58	0.31	256	1.35	47	0.25	3	0.02	18	0.09	8	0.04	150	0.79
40-44	5,003	3.34	21	0.42	63	1.26	18	0.36	0	0.00	1	0.02	5	0.10	49	0.98
45-49	332	0.22	1	0.30	2	0.60	0	0.00	0	0.00	0	0.00	0	0.00	4	1.20
50-54	16	0.01	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
55-59	4	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00

Table 12.4: Medical disorders in pregnancy by Parity 2013-2015

Parity	2013															
	Total Patients		Thyroid disease		Bronchial Asthma		Hematological disorder				Renal disease		Mental disorder		Others	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
1	42,071	34.84	101	0.24	596	1.42	190	0.45	9	0.02	13	0.03	17	0.04	725	1.72
2-5	71,778	59.43	222	0.31	1,136	1.58	328	0.46	19	0.03	25	0.03	32	0.04	1,222	1.70
>5	6,742	5.58	22	0.33	122	1.81	13	0.19	0	0.00	1	0.01	5	0.07	118	1.75
NA	180	0.15	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2	1.11
Parity	2014															
	Total Patients		Thyroid disease		Bronchial Asthma		Hematological disorder				Renal disease		Mental disorder		Others	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
1	48,484	34.59	111	0.23	730	1.51	206	0.42	2	0.00	18	0.04	15	0.03	674	1.39
2-5	83,950	59.89	244	0.29	1,348	1.61	342	0.41	12	0.01	23	0.03	24	0.03	1,192	1.42
>5	7,163	5.11	32	0.45	137	1.91	24	0.34	0	0.00	0	0.00	10	0.14	109	1.52
NA	565	0.40	0	0.00	2	0.35	1	0.18	1	0.18	1	0.18	0	0.00	1	0.18
Parity	2015															
	Total Patients		Thyroid disease		Bronchial Asthma		Hematological disorder				Renal disease		Mental disorder		Others	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
1	52,060	34.77	91	0.17	635	1.22	217	0.42	7	0.01	18	0.03	9	0.02	474	0.91
2-5	90,481	60.42	211	0.23	1,194	1.32	336	0.37	12	0.01	46	0.05	30	0.03	775	0.86
>5	6,242	4.17	12	0.19	101	1.62	20	0.32	0	0.00	2	0.03	6	0.10	59	0.95
NA	963	0.64	2	0.21	9	0.93	4	0.42	0	0.00	0	0.00	0	0.00	7	0.73

Table 12.5a: Medical disorders in pregnancy by Gestation 2013-2014

Gestation	2013															
	Total Patients		Thyroid disease		Bronchial Asthma		Hematological disorder				Renal disease		Mental disorder		Others	
							Thalassemia		ITP							
n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	
22-36 weeks	13,464	11.03	41	0.30	226	1.68	52	0.39	6	0.04	13	0.10	7	0.05	310	2.30
37-40 weeks	91,989	75.34	272	0.30	1,460	1.59	434	0.47	22	0.02	23	0.03	41	0.04	1,612	1.75
>40 weeks	11,125	9.11	32	0.29	148	1.33	44	0.40	0	0.00	3	0.03	4	0.04	134	1.20
NA	5,518	4.52	5	0.09	36	0.65	7	0.13	0	0.00	0	0.00	2	0.04	39	0.71
Gestation	2014															
	Total Patients		Thyroid disease		Bronchial Asthma		Hematological disorder				Renal disease		Mental disorder		Others	
							Thalassemia		ITP							
n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	
22-36 weeks	15,445	10.90	55	0.36	231	1.50	54	0.35	4	0.03	18	0.12	7	0.05	294	1.90
37-40 weeks	104,462	73.74	280	0.27	1,666	1.59	448	0.43	11	0.01	20	0.02	39	0.04	1,484	1.42
>40 weeks	13,237	9.34	35	0.26	216	1.63	56	0.42	0	0.00	3	0.02	2	0.02	163	1.23
NA	8,513	6.01	23	0.27	121	1.42	23	0.27	0	0.00	1	0.01	2	0.02	58	0.68

Table 12.5b: Medical disorders in pregnancy by Gestation 2015

Gestation	2015															
	Total Patients		Thyroid disease		Bronchial Asthma		Hematological disorder				Renal disease		Mental disorder		Others	
							Thalassemia		ITP							
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
22-36 weeks	17,714	11.71	36	0.20	220	1.24	61	0.34	2	0.01	29	0.16	11	0.06	185	1.04
37-40 weeks	113,387	74.96	258	0.23	1,473	1.30	467	0.41	17	0.01	30	0.03	26	0.02	998	0.88
>40 weeks	12,157	8.04	16	0.13	153	1.26	46	0.38	0	0.00	0	0.00	3	0.02	93	0.76
NA	8,010	5.30	10	0.12	118	1.47	12	0.15	0	0.00	8	0.10	6	0.07	54	0.67

Table 12.6: Medical disorders in pregnancy and fetal outcome 2013-2015

Pregnancy Outcomes	2013															
	Total Patients		Thyroid disease		Bronchial Asthma		Hematological disorder				Renal disease		Mental disorder		Others	
							Thalassemia		ITP							
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Fetal mobility-NICU	117,228	96.01	346	0.30	1,831	1.56	529	0.45	28	0.02	38	0.03	52	0.04	2,062	1.76
Fetal mortality	936	0.77	2	0.21	17	1.82	1	0.11	0	0.00	1	0.11	1	0.11	22	2.35
NA	3,932	3.22	2	0.05	22	0.56	7	0.18	0	0.00	0	0.00	1	0.03	11	0.28
Pregnancy Outcomes	2014															
	Total Patients		Thyroid disease		Bronchial Asthma		Hematological disorder				Renal disease		Mental disorder		Others	
							Thalassemia		ITP							
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Fetal mobility-NICU	136,958	96.68	383	0.28	2,197	1.60	571	0.42	15	0.01	40	0.03	49	0.04	1,955	1.43
Fetal mortality	1,080	0.76	2	0.19	13	1.20	5	0.46	0	0.00	1	0.09	1	0.09	28	2.59
NA	3,619	2.55	8	0.22	24	0.66	5	0.14	0	0.00	1	0.03	0	0.00	16	0.44
Pregnancy Outcomes	2015															
	Total Patients		Thyroid disease		Bronchial Asthma		Hematological disorder				Renal disease		Mental disorder		Others	
							Thalassemia		ITP							
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Fetal mobility-NICU	146,457	96.82	318	0.22	1,937	1.32	578	0.39	19	0.01	64	0.04	46	0.03	1,309	0.89
Fetal mortality	1,137	0.75	2	0.18	13	1.14	4	0.35	0	0.00	3	0.26	0	0.00	14	1.23
NA	3,674	2.43	0	0.00	14	0.38	4	0.11	0	0.00	0	0.00	0	0.00	7	0.19